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Appendix One – Drill Hole Logs

Diamond drill hole logs are stored as part of the University of Tasmania rock collection.
The following logs are available

Hole_ID	Easting	Northing	RL	Depth	Azimuth	dip
THRD 633A	50566	103166	375.7	375.7	50	-57
THRD 635	50367.62	102239.3	302.7	496	23	-80
THRD 636A	50516.88	102240.1	303.7	363.7	23	-80
THRD 643A	50269.86	102400.1	301.2	467	23	-80
THRD 645	50504.16	101919.7	304.8	400	23	-80
THRD 647	50377.31	102080.6	303.5	412	23	-80
THRD 752	50435.01	102080.6	303.9	395	23	-80
THRD 753	50270.84	102080.1	302.5	468.1	23	-80
THRD 759	50390.84	102210.2	303.2	445	360	-90
THRD 780	50245	102285	305	814	23	-80
THRD 780W1	50245	102285	305	814	23	-80
THRD 781	50135	102080	305	482.44	25	-80
TND 2	50271.87	101721.7	304.1	201.3	360	-90
TND 3	50898.01	101699.4	302.2	211.4	360	-90
TND 4	50410.06	101805.8	304.5	351	212	-60
TND 5	50509.74	102087.2	305	363	24	-60
TND 8	50100.26	102099.8	304.3	322.4	195	-67
TND 9	50500.22	101910.4	304.9	368	92	-88
TND 10	50349.85	102250	302.5	438	360	-90
TND 12	50499.9	102248.7	303.3	366	360	-90
TND 13	50200.19	102250.6	302	430.1	360	-90
TND 14	50199.3	102651.3	299	536.6	237	-90
TND 17	50582.7	102250.2	303.6	198	24	-60
TND 23	50560.54	101919.6	305.6	193.65	25	-60
TND 26	50100	103000	304	615.7	322	-89
TND 27	48900	105000	304	545.7	360	-90

Appendix Two – Whole Rock Geochemical Data

Abbrievations used in appendices

assoc	associated
brg	bearing
CA	core axis
cb-	carbonate
Cpy	chalcopyrite
cs	cleavage
DDG	diamond drill hole
ev, evap	evaporite pseudomorph
FI	fluid inclusion
FW	footwall
Host	Unaltered dolostone
HW	hangingwall
ib sh-cc & Scb	interbedded carbonaceous shale and dolomitic mudstone
lam	laminated
ox	oxidised
PMB	pyrite marker bed
py	pyrite
q, qtz	quartz
recry	recrystallised
Scb	carbonate
Scbmd	calcareous mudstone
Sd	dolomite
Sh-cc	carbonaceous shale
Sil	silicified
So-para	bedding parallel
Te	temperature eutectic
Th	temperature of homogenisation
Tm	temperature of melting
tr	trace
vn	vein
NN	Non-Nifty sample
Upper Carb	upper carbonate bed

Hole_ID	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5
Depth_Frm	137.0	147.9	160.8	169.1	178.9	193.8	201.5	205.9	212.4	217.1	225.1	229.8	238.7	250.3	261.9
Depth_to	140.2	152.8	163.9	173.0	181.6	197.4	205.0	207.6	215.2	220.3	225.7	230.3	241.2	251.1	262.5
Lith	ox Sh-cc	ox Sh-cc	ox Sh-cc	Sh-cc	ox Sh-cc	Recry Sd	Sh-cc & Sc	Sil	Sh-cc+spots	Sh-cc+spots	Recry Sd	Recry Sd	Recry Sd	Recry Sd	Sh-cc
Ident	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142
SiO2	60.17	61.18	65.22	61.03	63.09	21.33	56.51	85.01	68.56	61.64	42.29	29.92	17.10	22.71	55.30
TiO2	1.21	1.32	0.96	0.91	0.81	0.07	0.66	0.09	0.53	0.54	0.04	0.01	0.03	0.03	0.62
Al2O3	14.76	17.71	15.22	16.98	13.97	1.02	15.45	1.70	11.24	11.22	0.78	0.26	0.47	0.71	13.29
Fe2O3	3.50	2.30	2.59	3.08	3.87	22.77	7.30	4.56	4.68	5.07	7.82	21.03	26.16	24.28	7.35
MnO	0.01	0.01	0.01	0.01	0.02	1.00	0.24	0.07	0.02	0.11	0.78	1.94	2.81	2.63	0.06
MgO	1.47	2.06	1.63	1.97	2.08	7.92	3.35	0.53	4.85	9.84	8.91	11.50	15.42	14.97	12.70
CaO	0.02	0.03	0.02	<0.01	0.24	12.39	0.20	0.61	0.48	1.42	14.22	7.42	6.04	5.02	0.24
Na2O	0.06	0.10	0.06	<0.05	0.12	0.14	<0.05	0.03	<0.05	<0.05	0.18	<0.05	0.06	<0.05	<0.05
K2O	4.00	5.11	4.71	5.86	6.06	0.42	5.57	0.52	2.96	1.47	0.05	0.02	0.01	0.01	1.20
P2O5	0.09	0.15	0.09	0.05	0.20	0.53	0.15	0.43	0.34	0.50	0.31	0.23	0.33	0.56	0.16
BaO	0.10	0.22	0.13	0.13	0.16	0.21	0.40	0.01	0.08	0.03	0.00	0.01	0.01	0.01	0.08
ZnO	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CuO	0.01	0.01	0.01	0.04	0.01	0.51	0.04	1.79	0.10	0.69	1.31	0.03	0.01	0.01	0.01
PbO	0.02	0.02	0.02	0.02	0.02	0.05	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	14.11	9.61	9.06	9.43	9.29	18.74	9.41	3.23	6.29	7.46	16.95	23.07	30.07	28.78	8.07
Total	99.50	99.81	99.69	99.49	99.91	87.11	99.33	98.63	100.13	100.00	93.64	95.49	98.52	99.76	99.07
Sulphur	1.81	1.02	1.16	1.25	1.13	14.53	2.47	3.01	2.06	0.83	2.71	3.07	1.58	0.97	1.09
Sb	3	3	0	2	<1	16	5	2	4	2	2	2	<1	<1	2
Sn	6	7	6	7	5	<1	5	4	7	5	11	3	2	2	5
Cd	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	21	26	19	19	19	2	20	2	13	14	1	1	3	1	18
Zr	353	412	269	245	257	19	170	24	126	159	12	6	9	14	152
Sr	36	58	32	23	19	208	18	13	15	21	84	29	65	72	9
Ba	997	2041	1332	1328	1407	1900	3600	257	738	442	41	27	16	21	622
Y	29	57	43	42	40	13	31	7	22	25	5	2	4	8	30
U	7	6	5	6	5	2	6	2	5	6	3	2	6	2	5
Rb	143	212	195	242	233	17	210	21	112	56	2	1	1	1	49
Th	23	29	21	21	21	1	15	3	12	15	<1.5	<1.5	3	<1.5	14
Pb	53	61	63	95	49	470	55	283	89	12	14	5	5	114	45
As	16	8	5	10	8	378	54	84	109	10	33	24	34	49	21
Bi	<2	<2	<2	<2	<2	4	<2	28	26	5	3	3	<2	21	10
Zn	48	30	40	46	58	46	46	65	50	78	22	26	25	17	42
Cu	112	60	47	25	30	4100	294	14300	557	5500	10500	125	110	87	29
Ni	58	38	34	30	32	16	62	23	47	20	10	25	12	8	57

Hole_ID	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND5	TND8	TND8	TND8	TND8
Depth_Frm	270.3	282.3	292.0	300.1	310.4	316.1	323.0	330.8	339.7	347.7	357.5	88.2	103.0	111.8	121.4
Depth_to	272.1	284.1	292.8	301.2	310.7	316.9	324.1	331.4	340.5	348.4	358.4	88.4	103.4	112.1	121.8
Lith	Sh-cc	Sh-cc+ev	Sh-cc	Sh-cc	Sh-cc	Sh-cc	Fe Sd	Sh-cc & Sc	Sh-cc & Sc	Sh-cc & Sc	Sh-cc	Sil	Sh-cc	Sh-cc	Sh-cc
Ident	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1208	1209	1210	1211
SiO2	58.48	29.14	48.57	54.98	58.16	57.16	7.83	62.36	56.92	60.22	54.18	72.06	65.23	68.32	62.99
TiO2	0.54	0.28	0.63	0.65	0.42	0.39	0.05	0.52	0.43	0.50	0.67	1.25	1.21	1.41	0.62
Al2O3	11.46	7.38	14.35	13.64	10.52	10.13	0.88	10.28	10.15	10.26	13.68	12.49	13.22	15.25	19.13
Fe2O3	7.77	12.91	8.45	7.14	7.37	9.18	25.45	7.86	7.63	7.91	6.82	1.45	7.94	1.03	1.34
MnO	0.04	0.56	0.06	0.04	0.06	0.05	1.74	0.05	0.03	0.04	0.03	<0.01	<0.01	<0.01	<0.01
MgO	12.04	15.74	17.24	13.17	13.69	13.54	11.10	10.37	12.81	12.17	15.50	1.49	1.33	1.48	1.10
CaO	0.35	10.94	0.24	0.21	0.52	0.94	14.82	0.34	2.07	0.25	0.35	0.01	0.02	0.04	0.05
Na2O	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	<0.05	<0.05	<0.05	<0.05	0.15	0.14	0.13	0.22
K2O	0.81	0.02	0.31	1.28	0.11	0.05	0.01	0.73	0.08	0.36	0.42	4.17	3.36	3.81	3.68
P2O5	0.26	0.20	0.16	0.16	0.22	0.68	0.59	0.20	1.50	0.17	0.26	0.04	0.04	0.23	0.24
BaO	0.02	0.00	0.02	0.07	0.00	0.00	0.00	0.03	0.01	0.01	0.00	0.21	0.17	0.37	0.19
ZnO	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00
CuO	0.01	0.01	0.01	0.01	0.01	0.01	0.25	0.03	0.10	0.00	0.00	0.00	0.00	0.00	0.00
PbO	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	7.57	21.03	9.22	7.97	7.90	8.39	17.13	6.98	7.94	7.80	7.67	6.64	6.95	7.83	10.02
Total	99.34	98.29	99.26	99.32	98.98	100.52	79.99	99.75	99.68	99.70	99.58	99.96	99.62	99.90	99.58
Sulphur	2.21	4.22	1.10	1.37	1.78	3.57	13.64	2.64	2.49	3.28	0.41	0.57	0.03	0.34	1.76
Sb	<1	3	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	*1*	43	<1
Sn	5	2	5	6	4	2	5	5	3	3	4	5	*<1*	7	4
Cd	<1	2	<1	1	<1	1	<1	<1	<1	<1	<1	<1	*<1*	151	<1
Nb	12	7	25	17	13	9	1	13	10	11	18	22	*5*	31	15
Zr	118	65	188	140	107	80	14	106	90	125	149	369	*86*	29	148
Sr	9	128	7	7	8	14	397	6	22	4	8	32	*11*	<3	212
Ba	326	41	119	621	75	25	10	354	43	101	83	2032	583	2	1835
Y	21	15	31	27	18	18	10	19	20	19	30	33	37	34	27
U	5	2	6	4	5	20	9	5	7	4	4	5	5	7	5
Rb	34	1	14	55	5	3	1	31	3	15	18	152	130	14	144
Th	12	7	15	15	10	11	1	13	9	12	16	25	22	14	15
Pb	47	207	22	15	38	18	211	31	21	37	4	22	22	50	29
As	24	82	8	3	14	8	112	16	48	6	<3	<3	9	16	10
Bi	9	2	3	3	3	4	15	6	4	5	<2	<2	<2	<2	<2
Zn	66	63	82	62	64	65	48	50	83	138	30	31	82	45	29
Cu	33	59	15	20	17	19	1900	183	678	40	7	27	20	30	23
Ni	35	20	27	27	32	43	47	47	38	58	24	10	11	42	18

Hole_ID	TND8	TND8	TND8	TND8	TND8	TND8	TND8	TND8	TND8	TND8	TND8	TND8	TND8	TND8	TND8
Depth_Frm	127.6	132.2	139.5	151.0	158.4	169.4	178.3	183.2	189.1	200.3	212.1	219.8	231.2	240.3	251.3
Depth_to	127.9	132.5	140.1	151.2	158.6	171.2	180.8	184.6	189.7	200.5	212.5	220.0	231.5	243.1	253.2
Lith	Sh-cc	Sh-cc & Sc	Sh-cc	Sh-cc	Sh-cc	Sh-cc & Sc	Recry Sd	Sh-cc	Sh-cc & Sc	Sh-cc & Sc	Sh-cc & Sc	Sh-cc	Sh-cc & Sc	Sh-cc & Sc	Sh-cc
Ident	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226
SiO2	66.88	57.89	59.47	57.58	64.07	50.24	27.49	58.37	52.68	46.29	65.88	66.65	45.61	64.11	59.41
TiO2	1.13	0.53	0.96	0.89	0.92	0.75	0.28	0.78	0.62	0.51	0.75	0.79	0.63	0.69	0.70
Al2O3	13.12	18.17	14.82	14.98	16.36	12.74	5.55	14.62	14.85	12.00	16.19	13.72	12.95	14.73	16.66
Fe2O3	1.54	4.01	3.08	2.73	2.39	9.12	31.60	4.53	8.48	15.47	2.91	3.85	4.56	3.68	5.57
MnO	<0.01	<0.01	<0.01	0.01	0.02	0.06	2.45	0.02	0.60	1.30	0.02	0.02	0.35	0.01	0.20
MgO	1.18	1.18	1.34	1.47	1.64	1.47	6.04	1.73	4.12	5.06	1.92	1.55	6.15	1.71	2.41
CaO	0.02	0.04	0.01	0.02	0.06	0.06	0.46	0.03	1.98	0.37	0.18	0.20	8.23	0.28	0.25
Na2O	0.17	0.19	0.11	0.08	0.10	0.06	<0.05	0.09	0.11	0.06	0.08	0.07	0.09	0.08	0.09
K2O	3.71	4.33	4.46	5.13	4.55	5.36	2.06	6.19	5.87	4.76	6.52	6.44	5.69	6.37	6.57
P2O5	0.12	0.21	0.07	0.14	0.21	0.11	0.22	0.05	0.16	0.14	0.17	0.17	0.20	0.18	0.18
BaO	0.16	0.17	0.11	0.13	0.15	0.12	0.06	0.15	0.13	0.13	0.18	0.16	0.15	0.20	0.29
ZnO	0.00	0.00	0.00	0.00	0.00	0.01	0.11	0.02	0.04	0.01	0.00	0.00	0.00	0.00	0.00
CuO	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01
PbO	0.02	0.02	0.02	0.02	0.02	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	11.72	12.68	15.16	16.73	9.31	19.36	24.31	12.77	9.84	13.67	4.82	5.86	14.96	7.50	7.59
Total	99.75	99.40	99.59	99.89	99.77	99.51	100.69	99.35	99.48	99.77	99.62	99.49	99.56	99.54	99.93
Sulphur	1.35	4.27	2.66	2.47	0.77	5.48	7.02	1.69	0.43	0.52	0.45	1.20	0.69	1.31	1.18
Sb	<1	<1	2	1	<1	3	3	<1	<1	<1	<1	1	<1	2	1
Sn	5	4	6	6	6	6	4	5	6	3	5	6	5	5	5
Cd	1	<1	<1	<1	1	2	4	<1	<1	2	<1	<1	<1	<1	<1
Nb	23	17	20	21	20	19	6	20	19	16	29	17	23	18	18
Zr	337	143	291	361	279	261	83	231	153	134	216	263	177	186	173
Sr	76	134	57	96	91	41	83	19	61	18	36	19	167	22	24
Ba	1470	1705	1048	1296	1292	1083	493	1402	1200	1266	1677	1400	1323	1864	2654
Y	55	35	27	47	59	33	16	33	35	27	33	35	35	28	30
U	7	5	9	8	9	10	3	6	4	2	3	5	3	3	3
Rb	148	150	156	172	192	187	85	234	258	195	252	220	201	230	255
Th	22	12	24	24	25	23	7	20	16	13	18	22	14	17	16
Pb	27	27	120	67	55	361	240	142	56	28	88	46	28	77	34
As	6	5	16	9	4	29	26	24	<3	<3	10	12	8	24	19
Bi	<2	<2	<2	<2	<2	<2	2	<2	<2	<2	<2	<2	<2	<2	<2
Zn	25	33	42	53	61	109	939	180	278	81	35	18	23	13	15
Cu	29	59	53	24	22	25	112	21	13	22	12	37	12	35	42
Ni	24	25	77	103	41	170	36	64	20	12	14	38	19	72	39

Hole_ID	TND8	TND8	TND8	TND8	TND8	TND8	TND8	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10
Depth_Frm	262.3	271.7	280.2	289.1	300.5	313.3	320.9	106.4	119.0	127.0	141.1	149.9	160.9	170.3	182.9
Depth_to	264.9	272.3	280.6	290.1	301.4	314.1	321.2	110.0	120.0	129.5	141.4	151.0	164.0	170.8	185.0
Lith	Recry Sd	Sh-cc & Sc	Sh-cc & Sc	Sh-cc	Sh-cc & Sc	Sh-cc & Sc	Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc
Ident	1227	1228	1229	1230	1231	1232	1233	1000	1001	1002	1003	1004	1005	1006	1007
SiO2	28.57	62.67	57.46	55.57	59.50	50.35	61.92	52.41	55.07	57.71	53.66	61.49	45.39	61.21	60.77
TiO2	0.12	0.68	0.68	0.66	0.74	0.63	0.80	0.88	0.96	0.95	1.11	1.19	0.81	0.94	1.25
Al2O3	2.18	16.21	15.39	15.05	16.25	13.33	14.91	17.61	12.98	16.35	15.73	16.39	12.00	13.02	13.59
Fe2O3	31.30	4.57	6.58	6.38	6.10	7.09	6.46	3.51	4.95	5.24	4.65	2.59	21.57	7.44	5.18
MnO	1.77	0.02	0.15	0.10	0.03	0.21	0.01	0.01	0.02	0.04	0.01	0.01	0.42	0.47	0.29
MgO	9.02	2.06	3.96	4.27	4.26	6.35	2.97	1.09	1.48	1.71	1.73	1.90	1.71	2.37	2.37
CaO	0.62	0.21	1.75	2.70	0.57	5.33	0.20	0.12	0.01	0.03	0.04	0.01	0.05	0.43	0.32
Na2O	<0.05	<0.05	0.06	0.10	0.06	0.10	<0.05	0.16	0.09	0.07	<0.05	0.10	0.06	0.06	0.07
K2O	0.91	6.60	6.13	6.03	6.31	4.87	5.74	3.71	4.25	5.02	4.86	5.21	4.07	5.06	5.46
P2O5	0.29	0.18	0.24	0.48	0.14	0.20	0.17	0.36	0.05	0.05	0.07	0.05	0.26	0.30	0.23
BaO	0.04	0.18	0.13	0.11	0.11	0.11	0.11	0.22	0.15	0.18	0.17	0.15	0.14	0.15	0.20
ZnO	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.05	0.05
CuO	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.01	0.01	0.00
PbO	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.05	0.01	0.01	0.01	0.00	0.01	0.00	0.00
Loss inc. S-	25.58	5.90	7.29	8.23	5.49	11.35	6.08	19.60	20.00	12.60	18.10	10.30	12.90	8.50	9.80
Total	100.46	99.34	99.82	99.68	99.57	99.93	99.37	99.74	100.02	99.97	100.14	99.39	99.57	100.01	99.58
Sulphur	2.97	1.72	1.18	1.12	0.17	0.61	1.63	3.24	3.09	3.05	2.57	0.98	2.26	1.59	0.78
Sb	3	2	<1	1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	1
Sn	<1	5	5	6	5	4	5	5	6	6	6	6	3	5	5
Cd	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	2	2	<1	<1
Nb	3	20	24	21	18	18	17	21	23	24	26	26	15	17	19
Zr	41	184	177	177	160	135	222	320	305	350	348	359	210	248	325
Sr	19	15	37	49	16	76	10	279	27	16	44	24	24	124	21
Ba	370	1637	1199	1028	990	881	1090	2011	1592	1827	1746	1505	1063	1535	1891
Y	13	30	40	41	28	34	34	85	36	42	32	51	44	35	35
U	2	3	4	3	4	3	5	11.9	8.4	5	6.2	5.5	12.3	3.2	5
Rb	34	235	220	229	258	189	222	96	152	175	174	192	147	191	193
Th	3	17	17	17	16	15	20	25.2	22.6	24.3	25.5	26.1	17.2	16.9	20.1
Pb	134	21	19	42	7	7	125	457	58	55	59	29	58	28	19
As	14	19	12	6	<3	<3	<3	14	19	8	9	<3	78	5	<3
Bi	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zn	87	26	51	49	65	69	44	52	41	53	54	58	1430	431	374
Cu	379	77	25	23	23	36	38	63	67	61	49	24	58	50	20
Ni	14	24	23	26	29	33	25	57	50	50	35	27	190	48	56

Hole_ID	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10
Depth_Frm	199.3	212.0	218.4	222.6	230.0	239.2	250.6	258.8	269.5	280.0	290.1	298.6	301.9	310.5	311.4
Depth_to	199.6	212.5	218.9	222.8	230.6	239.7	251.1	259.2	270.0	280.2	290.5	299.0	302.1	310.8	311.7
Lith	ox Sh-cc	Scbmd	Scb	Scb	› Sh-cc & Sc	Scb	Scb	Scb	Scb	› Sh-cc & Sc	Sh-cc	› Sh-cc & Sc	Sh-cc	Sh-cc	Sh-cc
Ident	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022
SiO2	63.14	22.74	28.86	35.29	52.09	31.25	24.01	23.52	23.84	55.43	58.77	49.52	61.24	58.69	53.94
TiO2	1.01	0.39	0.32	0.59	0.89	0.59	0.39	0.36	0.35	0.79	0.84	0.70	0.84	0.95	0.84
Al2O3	13.59	4.82	6.96	7.48	11.29	6.81	5.25	5.37	5.2	13.48	12.9	10.84	12.5	14.93	14.58
Fe2O3	4.81	3.13	5.43	5.02	4.59	4.39	2.22	3.1	2.46	4.87	4.96	4.15	5.54	5.74	7.63
MnO	0.17	0.18	0.31	0.09	0.04	0.18	0.24	0.21	0.21	0.06	0.07	0.19	0.01	0.02	0.02
MgO	2.61	4.77	11.66	3.4	3.63	9.95	14.17	14.05	14.44	4.33	3.53	6.01	1.59	2.03	2.2
CaO	0.29	32.48	17.55	22.43	8.25	16.86	20.3	20.41	20.48	3.99	3.13	7.89	0.14	0.38	0.49
Na2O	0.06	0.08	0.06	0.07	0.06	0.07	0.08	0.11	0.08	0.06	<0.05	<0.05	<0.05	0.06	<0.05
K2O	5.58	1.96	2.88	3.27	5.36	3.39	2.84	2.83	2.8	6.05	5.78	4.76	5.59	6.84	6.69
P2O5	0.2	0.27	0.19	0.31	0.22	0.24	0.26	0.22	0.23	0.23	0.31	0.23	0.09	0.07	0.29
BaO	0.27	0.12	0.12	0.16	0.24	0.20	0.21	0.17	0.17	0.21	0.18	0.14	0.16	0.20	0.18
ZnO	0.02	0.02	0.01	0.01	0.01	0.09	0.01	0.00	0.00	0.00	0.01	0.00	0.04	0.01	0.02
CuO	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PbO	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.02
Loss inc. S-	7.9	29.3	26.7	21.4	13.4	25.5	30.7	30.2	30.5	10.6	9.6	15.3	11.9	10	12.5
Total	99.66	100.25	101.05	99.52	100.09	99.54	100.68	100.55	100.76	100.10	100.09	99.78	99.65	99.93	99.46
Sulphur	1.01	0.76	0.33	2.01	1.82	1.46	0.46	0.74	0.44	1.82	1.72	0.65	2.97	2.42	3.48
Sb	<1	<1	<1	<1	<1	<1	<1	1	1	<1	<1	<1	<1	1	2
Sn	4	3	3	5	5	3	4	4	4	4	5	4	4	6	5
Cd	1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	16	8	11	10	16	11	9	8	8	15	15	14	17	18	17
Zr	261	104	90	157	238	162	127	110	110	189	230	216	240	269	203
Sr	19	262	133	209	76	110	76	90	85	37	45	85	11	15	18
Ba	2437	1056	1070	1283	2247	1861	1960	1673	1751	1816	1590	1243	1492	1736	1697
Y	29	18	19	33	31	25	18	19	17	29	46	42	30	41	59
U	4.3	3.1	1.6	2.2	2.9	2.7	1.5	1.5	2.2	4.7	3.3	2.2	4.7	5.6	7.1
Rb	205	75	122	121	187	108	83	90	88	234	223	186	201	247	255
Th	18.8	6.3	7.8	10.8	17.1	10.3	8.9	6.9	6.8	15.9	18.8	15.4	19.3	21.3	18.7
Pb	24	14	12	30	32	61	37	14	11	24	31	19	128	113	160
As	<3	<3	<3	<3	7	7	5	3	<3	23	8	3	19	15	27
Bi	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zn	219	150	128	99	126	746	114	48	53	38	129	51	292	104	195
Cu	45	16	14	45	45	48	13	20	17	23	22	12	24	38	46
Ni	41	14	19	25	41	34	14	20	13	42	37	26	42	41	60

Hole_ID	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10	TND10
Depth_Frm	320.0	330.9	337.8	341.5	350.4	361.8	369.8	375.5	388.1	390.7	398.1	409.7	420.1	430.9	432.1
Depth_to	320.5	331.3	338.1	342.4	350.8	364.1	370.8	376.0	388.2	391.3	398.3	410.0	420.4	431.1	433.5
Lith	Sh-cc	Sh-cc	Sh-py	Py-sh	Sh-cc	Sh-cc+ev	Recry Sd	Sil Scb	Sil	Sh-cc	Sil Scb	Sil Scb	Sil Scb	Sh-cc	Recry Sd
Ident	**1023**	**1024**	**1025**	**1026**	**1027**	**1028**	**1029**	**1030**	**1031**	**1032r**	**1033**	**1034**	**1035**	**1036r**	**1037**
SiO2	56.82	55.24	35.05	15.23	67.91	57.46	56.53	72.36	90.35	59.98	61.86	76.50	54.67	59.35	59.11
TiO2	0.92	0.77	0.42	0.14	0.61	0.57	0.18	0.27	0.03	0.60	0.15	0.22	0.13	0.42	0.45
Al2O3	14.93	14.76	8.45	2.19	12.83	10.38	3.76	5.92	0.63	11.84	3.68	5.09	2.70	9.16	10.16
Fe2O3	4.59	8.29	21.99	25.50	4.39	5.19	9.00	4.08	3.57	5.05	10.81	4.24	12.73	7.76	5.63
MnO	0.02	0.03	3.21	1.77	0.01	0.15	0.28	0.06	0.01	0.02	0.01	0.02	0.02	0.05	0.05
MgO	2.22	1.77	3.01	9.67	1.90	11.42	6.27	7.74	0.37	10.48	4.87	6.42	3.51	13.22	15.16
CaO	0.27	0.10	0.54	11.78	0.53	3.13	5.92	1.43	0.31	0.30	1.50	0.59	3.96	0.51	0.61
Na2O	0.07	<0.05	0.57	0.15	<0.05	<0.05	0.11	<0.05	<0.05	0.18	0.08	0.10	0.15	<0.05	<0.05
K2O	7.25	6.94	3.87	0.86	4.81	1.24	0.42	0.33	0.10	1.64	0.02	0.04	0.04	0.01	0.01
P2O5	0.11	0.10	0.18	0.25	0.38	0.38	1.27	0.46	0.17	0.21	1.12	0.44	2.97	0.33	0.39
BaO	0.20	0.22	0.16	0.05	0.43	0.03	0.02	0.00	0.01	0.05	0.00	0.00	0.00	0.00	0.00
ZnO	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.01
CuO	0.00	0.00	0.01	0.13	0.59	0.06	4.22	0.01	2.39	0.06	9.10	2.07	10.89	0.04	0.34
PbO	0.02	0.02	0.02	0.05	0.01	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Loss inc. S-	12.20	11.10	22.10	20.60	5.80	8.80	11.50	7.40	1.50	9.10	5.50	4.00	7.20	8.20	8.40
Total	99.63	99.34	99.58	88.37	100.19	98.82	99.50	100.06	99.49	99.52	98.71	99.72	99.00	99.06	100.32
Sulphur	1.56	4.63	7.28	12.01	2.09	0.98	5.04	1.16	2.28	1.50	7.47	1.92	9.25	3.80	1.91
Sb	2	1	1	6	1	2	3	3	<1	3	<1	<1	<1	<1	<1
Sn	5	6	4	2	8	2	20	2	12	12	10	18	77	5	13
Cd	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	22	18	11	3	15	14	3	7	1	15	3	5	2	13	15
Zr	321	227	140	41	158	196	57	70	11	152	22	59	38	101	118
Sr	16	10	11	200	29	37	83	18	5	7	20	6	47	7	9
Ba	1891	2064	1353	380	3852	374	201	108	97	628	40	33	59	14	17
Y	40	43	36	11	27	29	17	13	2	14	5	9	29	14	21
U	7.3	5.9	4.6	1.5	4.6	4.5	39.8	6	3.7	6.7	5	4.4	276	6.6	7.5
Rb	254	239	147	70	179	45	15	12	4	63	2	1	2	1	1
Th	26.3	22.7	11.9	4.9	16.5	16.3	*4.2*	6.5	1.6	15.5	2.0	4.8	5.7	11.5	11.9
Pb	222	198	174	453	59	22	177	64	1	11	10	3	34	32	16
As	16	47	33	150	32	25	147	100	11	32	20	<3	4	58	57
Bi	<2	2	2	<2	10	8	24	9	<2	5	8	2	4	5	3
Zn	102	37	74	76	44	45	69	20	43	43	30	44	212	93	105
Cu	30	52	80	1064	4700	506	33700	140	19100	329	10000	16500	87000	286	2700
Ni	63	70	79	16	32	25	26	17	7	32	7	11	8	19	15

Hole_ID	TND10	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12
Depth_Frm	435.8	147.4	170.3	184.1	201.3	212.8	220.8	226.3	231.2	240.2	249.2	256.3	259.3	263.8	267.4
Depth_to	436.0	147.6	170.5	184.5	201.4	213.4	221.0	229.0	234.2	242.3	249.8	258.2	259.5	265.0	267.6
Lith	Sil	ox Sh-cc	ox Sh-cc & Sox	Sh-cc & Sox	Sh-cc & S	Scb	Scd	Sh-cc	Sh-cc	Sh-cc	Sh-cc	Sh-cc	Py-sh	Sh-cc	Py-sh
Ident	1038	1094	1095	1096	1097	1098	1071	1072	1073	1074	1075	1076	1077	1078	1079
SiO2	73.65	56.78	60.92	60.76	59.85	23.28	13.35	58.61	61.92	60.65	51.49	49.85	5.03	50.59	35.82
TiO2	0.09	1.06	1.39	1.36	1.06	0.45	0.20	0.92	0.93	0.84	0.63	0.80	0.06	0.92	0.11
Al2O3	2.15	16.12	16.08	13.98	13.85	5.52	3.00	14.41	14.46	14.90	11.86	13.68	1.07	18.58	1.84
Fe2O3	11.23	3.57	2.22	3.95	5.89	4.53	4.71	6.70	4.31	4.21	5.56	7.82	33.98	4.44	23.75
MnO	0.03	0.02	0.01	0.01	0.11	0.32	0.35	0.01	0.01	0.02	0.09	0.04	1.20	0.03	1.75
MgO	2.82	2.05	1.75	2.05	2.07	13.22	14.67	2.21	2.25	2.05	2.66	2.08	7.02	2.58	6.08
CaO	1.00	0.01	0.01	0.34	0.25	19.98	23.31	0.37	0.30	0.17	6.55	0.25	11.55	0.28	5.22
Na2O	0.02	0.09	<0.05	0.07	0.06	0.11	<0.05	0.07	0.06	0.06	0.10	0.11	0.13	0.13	<0.05
K2O	0.02	5.05	4.67	6.32	6.42	2.75	1.21	6.37	6.25	6.36	5.13	7.00	0.48	8.10	0.68
P2O5	0.54	0.04	0.04	0.26	0.18	0.28	0.11	0.28	0.20	0.13	4.05	0.18	0.07	0.19	0.34
BaO	0.00	0.16	0.12	0.29	0.44	0.27	0.08	0.25	0.21	0.22	0.22	0.59	0.48	3.01	0.02
ZnO	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.01	0.00	0.01	0.01	0.26	0.11	0.01	0.04
CuO	0.01	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.25	0.96
PbO	0.02	0.01	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.01	0.06	0.55	0.01	0.05
Loss inc. S-	7.80	14.85	12.44	10.31	9.17	29.25	36.42	9.30	9.31	10.30	10.92	17.48	23.20	10.39	21.97
Total	99.38	99.81	99.68	99.70	99.41	99.96	97.41	99.52	100.21	99.93	99.28	100.21	84.97	99.52	98.69
Sulphur	8.09	2.31	1.02	2.16	3.04	1.50	0.25	3.46	1.58	1.79	1.41	3.32	25.92	2.18	11.71
Sb	4	<1	<1	<1	<1	<1	<1	2	<1	1	2	3	21	3	9
Sn	2	6	5	5	5	4	4	5	4	6	4	4	<1	12	2
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	8	3	<1	<1
Nb	2	22	23	20	19	9	5	17	18	20	16	20	1	23	3
Zr	25	322	381	316	291	127	68	252	264	266	201	279	16	265	45
Sr	25	14	14	22	16	83	132	13	12	11	103	18	265	42	145
Ba	54	1708	1228	2556	3603	2777	689	2258	1917	2067	1792	5660	4643	26800	201
Y	7	31	44	37	37	19	17	45	42	43	155	38	8	33	14
U	14.9	5.5	6.6	4.7	5	2.3	1.5	4.5	4.6	5.2	6.2	8.8	1.5	9.7	2
Rb	1	190	180	208	220	84	49	246	240	237	204	241	11	261	65
Th	*3.5*	22.3	25.3	21.3	23.1	8.6	3.9	21.3	18.7	22.3	19.6	22.4	2	*Ba Int*	3.4
Pb	213	61	24	23	69	16	12	57	40	90	71	622	5064	129	496
As	49	7	<3	10	15	7	<3	30	14	16	13	39	357	64	349
Bi	22	<2	<2	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	5
Zn	32	41	47	66	383	35	35	59	57	78	64	2200	915	158	273
Cu	98	87	34	92	115	28	9	37	18	35	24	23	251	1822	7688
Ni	28	42	45	75	125	24	6	68	77	68	47	97	35	79	27

Hole_ID	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12	TND12
Depth_Frm	272.4	277.8	281.8	287.4	287.4	299.1	299.1	304.0	311.7	320.2	329.2	340.8	348.1	355.4	361.1
Depth_to	274.4	280.3	282.0	290.4	290.4	299.3	299.3	304.2	311.9	320.4	329.3	341.4	348.3	355.7	361.2
Lith	Sh-cc	› Sh-cc & Sc	Sil Scb	Sh-cc+ev	Sh-cc+ev	Sil	Sil	Sil	› Sh-cc & Sc	Sil Scb	Sil	Sil Scb	› Sh-cc & Scb		
Ident	1080	1081	1082r	1083	1083	1084	1084	1085r	1086	1087	1088	1089	1090	1091	1092
SiO2	58.93	52.39	85.94	66.30	66.30	83.39	83.39	91.93	54.42	63.18	72.13	85.36	65.60	68.22	72.62
TiO2	0.64	0.59	0.05	0.58	0.58	0.02	0.02	0.10	0.01	0.07	0.33	0.01	0.40	0.33	0.18
Al2O3	14.12	12.75	1.07	12.69	12.69	0.51	0.51	2.16	0.24	1.06	7.28	0.25	8.85	7.86	4.55
Fe2O3	6.56	9.86	3.53	3.54	3.54	5.07	5.07	1.65	16.44	14.40	4.61	3.08	5.18	5.57	7.29
MnO	0.08	0.58	0.02	0.02	0.02	0.07	0.07	0.01	0.04	0.04	0.02	0.11	0.03	0.02	0.03
MgO	2.55	6.33	0.46	5.52	5.52	1.02	1.02	2.58	0.68	1.37	7.74	1.45	11.80	10.49	6.42
CaO	0.65	0.69	0.82	0.34	0.34	1.45	1.45	0.80	3.97	0.76	0.41	2.77	0.57	0.50	1.54
Na2O	<0.05	0.12	0.04	<0.05	<0.05	0.04	0.04	<0.05	0.12	0.03	0.07	0.07	<0.05	<0.05	<0.05
K2O	5.30	3.90	0.32	3.47	3.47	0.10	0.10	0.11	0.03	0.01	0.50	0.04	0.13	0.07	0.01
P2O5	0.33	0.23	0.39	0.26	0.26	0.25	0.25	0.56	2.55	0.20	0.31	0.56	0.41	0.36	0.92
BaO	0.83	0.44	0.03	0.25	0.25	0.01	0.01	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.00
ZnO	0.02	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.01
CuO	0.33	0.05	2.47	0.01	0.01	3.19	3.19	0.30	11.80	10.93	1.43	1.29	0.00	0.00	0.00
PbO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Loss inc. S-	8.97	11.61	2.37	6.63	6.63	3.57	3.57	*2.13*	7.37	5.93	4.64	4.06	6.59	6.05	6.21
Total	99.31	99.54	97.51	99.67	99.67	98.69	98.69	102.33	97.68	97.99	99.49	99.06	99.57	99.48	99.78
Sulphur	3.31	1.74	2.22	1.23	1.23	3.31	3.31	0.42	12.27	9.93	1.42	1.71	1.66	2.28	4.39
Sb	4	1	<1	2	2	1	1	<1	1	1	<1	<1	<1	1	2
Sn	6	6	14	5	5	17	17	3	93	135	11	20	4	1	2
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	17	17	<1	19	19	<1	<1	2	<1	<1	10	<1	10	12	4
Zr	171	156	15	172	172	4	4	30	2	13	87	2	82	91	38
Sr	33	27	20	15	15	15	15	12	44	6	7	25	9	8	16
Ba	7567	4166	340	2266	2266	120	120	69	4	4	254	52	108	75	18
Y	29	30	5	25	25	3	3	7	17	3	14	4	16	13	12
U	5.6	3.9	1.5	7.2	7.2	1.5	1.5	5.5	44	7.9	5.2	6	5.1	8.7	42.5
Rb	207	162	13	131	131	4	4	4	1	1	19	2	5	3	1
Th	17.8	15.3	<1.5	14.5	14.5	<1.5	<1.5	2.5	<1.5	4.0	9.0	<1.5	9.6	8.4	4.4
Pb	91	34	32	20	20	7	7	8	9	3	13	11	18	10	30
As	124	53	58	40	40	19	19	21	85	35	31	11	77	38	131
Bi	10	3	17	13	13	2	2	2	5	4	<2	<2	3	6	6
Zn	304	30	37	51	51	47	47	15	129	126	55	27	78	86	80
Cu	2600	415	19700	53	53	25500	25500	2400	94300	87300	11400	10300	19	24	29
Ni	72	31	13	38	38	5	5	8	5	2	10	9	20	32	42

Hole_ID	TND12	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13
Depth_Frm	365.4	152.6	163.0	171.5	182.0	190.6	198.9	209.5	218.3	230.2	237.3	249.0	255.5	263.2	272.6
Depth_to	365.5	152.7	164.9	174.8	184.0	191.7	201.9	211.7	219.9	230.8	239.8	249.4	256.3	265.3	275.1
Lith		ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	Sh-cc & Sc	ox Sh-cc	ox Sh-cc	Sh-cc & Sc	Recry Sd	Recry Sd	Recry Sd	Sh-cc	Scb	Scb
Ident	1093	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167
SiO2	73.62	54.90	65.76	64.95	62.27	56.97	56.92	58.00	63.48	5.80	13.99	36.23	60.33	26.90	31.92
TiO2	0.30	0.75	1.18	1.38	1.10	1.17	1.23	1.01	0.72	0.19	0.28	0.60	0.73	0.43	0.40
Al2O3	6.94	13.15	16.33	15.45	14.89	13.38	13.38	12.24	17.11	3.32	3.77	7.89	17.21	6.93	8.15
Fe2O3	3.98	9.71	2.18	2.79	2.69	8.68	9.39	9.81	2.71	55.39	48.00	29.13	5.02	2.50	4.18
MnO	0.03	0.01	<0.01	<0.01	<0.01	0.37	0.43	0.62	0.02	4.56	3.97	2.24	0.10	0.19	0.25
MgO	9.51	1.50	1.96	1.73	1.72	1.57	1.58	1.46	2.00	0.94	0.92	1.36	2.70	13.27	10.94
CaO	0.23	0.11	0.01	0.06	0.02	0.19	0.06	0.09	0.01	0.50	0.33	0.25	0.17	18.35	15.95
Na2O	<0.05	0.07	0.10	0.11	0.16	0.11	<0.05	0.11	0.09	<0.05	0.06	0.14	0.19	0.15	0.14
K2O	0.01	3.43	4.51	4.67	4.44	3.87	3.84	3.36	5.22	0.70	1.00	2.77	6.65	3.41	3.31
P2O5	0.17	0.22	0.06	0.20	0.09	0.49	0.12	0.19	0.10	0.08	0.13	0.15	0.15	0.12	0.12
BaO	0.00	0.11	0.18	0.19	0.26	0.38	0.23	0.30	0.36	0.06	0.10	0.21	0.37	0.22	0.09
ZnO	0.01	0.00	0.00	0.00	0.00	0.05	0.06	0.09	0.01	0.60	0.70	0.26	0.02	0.01	0.00
CuO	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PbO	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	5.23	15.47	7.70	8.82	13.05	12.58	12.12	12.29	7.88	27.73	26.68	18.75	6.20	27.82	24.93
Total	100.03	99.44	99.97	100.35	100.69	99.81	99.43	99.58	99.71	99.86	99.93	99.98	99.84	100.31	100.38
Sulphur	1.22	6.58	0.93	1.36	1.38	2.04	2.01	1.39	0.92	0.42	0.41	1.95	1.71	0.46	0.27
Sb	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	1	<1	<1	<1
Sn	2	5	6	5	4	5	4	6	6	<1	3	4	6	4	4
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	6	4	1	<1	<1	<1
Nb	7	14	21	21	21	18	20	17	25	6	6	11	20	9	11
Zr	63	212	320	368	317	300	310	277	230	54	95	174	173	135	98
Sr	6	112	20	38	23	84	31	47	31	4	29	39	16	83	116
Ba	70	924	1700	1800	2400	3400	2200	2750	3200	538	1014	2000	3334	2200	904
Y	9	43	58	58	44	58	46	38	44	33	28	44	32	16	19
U	21.6	6	6	7	8	5	8	5	6	2	4	4	4	2	3
Rb	1	98	146	145	147	127	139	132	215	30	42	109	271	115	139
Th	7.8	17	20	23	21	19	21	19	18	4	7	12	15	9	9
Pb	9	85	21	38	51	63	42	50	79	67	65	45	49	21	10
As	5	14	5	7	8	11	11	8	<3	<3	<3	5	5	<3	<3
Bi	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	2	<2	<2	<2
Zn	103	35	35	46	46	476	436	658	99	4800	5600	2100	195	67	49
Cu	9	72	32	34	45	50	49	56	34	22	21	23	29	18	18
Ni	24	126	29	49	44	74	61	84	33	148	132	116	28	13	14

Hole_ID	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13	TND13
Depth_Frm	281.6	288.0	294.4	306.6	309.2	322.9	330.7	343.5	351.5	360.0	363.5	374.0	378.6	382.6	387.5
Depth_to	282.7	289.5	296.7	307.9	314.7	323.4	331.0	343.8	352.0	360.2	363.7	376.5	378.8	382.8	387.9
Lith	Sh-cc	Sh-cc	Sh-cc	Sil py	Sh-cc & Sc	Sh-py	Sh-cc	Recry Sd	Sil	Sil	Sil	Recry Sd		Sil	Sil
Ident	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182
SiO2	60.46	58.03	55.83	27.24	39.21	32.93	45.82	33.95	91.50	82.10	89.24	9.28	82.69	81.37	85.32
TiO2	0.89	0.82	0.76	0.20	0.40	0.08	0.38	0.11	0.05	0.22	0.03	0.22	0.02	0.16	0.04
Al2O3	14.30	15.09	13.85	3.84	9.60	1.91	7.22	2.33	1.17	5.06	0.68	5.46	0.42	4.43	0.63
Fe2O3	5.55	4.59	6.85	33.44	17.75	24.37	15.65	19.01	3.15	2.62	5.00	25.31	6.17	3.27	4.25
MnO	0.01	0.02	0.03	2.14	1.39	1.71	1.10	1.47	0.02	0.04	0.01	2.45	0.09	0.03	0.14
MgO	2.05	2.09	1.80	5.64	7.61	10.75	9.03	15.72	0.43	4.63	0.30	16.60	0.91	4.08	1.51
CaO	0.44	0.33	0.15	1.56	0.93	2.15	0.38	0.83	0.55	0.63	1.03	5.76	1.58	0.50	2.54
Na2O	0.06	0.08	0.15	<0.05	<0.05	<0.05	0.10	0.80	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05
K2O	6.41	6.70	6.49	1.37	4.16	0.74	2.64	0.12	0.37	0.75	0.18	1.48	0.10	0.56	0.14
P2O5	0.24	0.10	0.12	0.51	0.43	0.20	0.17	0.12	0.28	0.46	0.76	0.48	0.25	0.35	0.48
BaO	0.16	0.16	0.19	0.04	0.15	0.04	0.13	0.01	<0.01	0.01	<0.01	0.03	<0.01	0.01	0.01
ZnO	0.01	0.00	0.00	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CuO	0.00	0.00	0.00	0.06	0.03	0.58	0.09	0.36	1.30	0.18	1.80	0.01	3.44	0.41	0.86
PbO	0.02	0.02	0.02	0.05	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	8.75	11.53	13.31	22.17	18.33	25.00	16.77	25.95	1.21	3.41	1.58	31.91	3.40	4.05	4.22
Total	99.33	99.54	99.53	98.33	100.03	100.48	99.48	100.79	100.03	100.15	100.61	99.08	99.07	99.23	100.14
Sulphur	2.59	1.98	3.32	10.62	1.16	2.77	1.63	1.29	1.15	0.33	2.37	0.35	2.92	0.90	1.83
Sb	<1	<1	<1	4	3	<1	3	3	<1	1	<1	<1	<1	<1	<1
Sn	6	6	5	2	5	1	5	2	8	7	10	4	17	4	3
Cd	<1	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	18	19	17	4	13	3	10	3	<1	5	1	6	<1	5	<1
Zr	251	250	241	53	116	36	139	38	15	50	10	63	7	44	13
Sr	19	15	16	46	61	55	13	32	19	14	18	64	44	14	43
Ba	1481	1523	1707	458	1327	350	1262	30	94	182	74	472	39	130	47
Y	54	39	39	28	34	9	19	6	3	8	5	8	3	8	4
U	5	5	7	2	4	2	2	2	3	18	8	3	2	4	5
Rb	240	245	225	94	182	33.5	108	5	15	29	7	55	4	22	5
Th	19	20	21	6	11	4	11	4	2	5	<1.5	6	2	4	1
Pb	108	67	153	488	33	57	44	15	21	13	28	6	10	17	7
As	18	11	19	57	13.6	38	28	29	32	11	65	11	10	25	37
Bi	<2	2	3	3	<2	7	4	<2	3	3	7	3	<2	13	4
Zn	87	74	52	90	46	170	45	27	30	22	25	25	50	20	45
Cu	34	22	29	512	100	4600	629	2900	10400	1400	14400	109	27500	3300	6900
Ni	69	108	97	35	26	18	16	7	2	5	5	5	6	12	7

Hole_ID	TND13	TND13	TND13	TND13	TND13	TND17	TND17	TND17	TND17	TND17	TND17	TND17	TND17	TND17	TND17
Depth_Frm	396.0	399.6	409.9	420.1	428.6	100.0	109.4	120.1	128.5	138.3	152.0	159.4	165.2	167.9	179.3
Depth_to	396.2	399.8	410.1	420.4	428.9	101.3	110.6	120.7	129.5	140.2	154.3	161.2	165.8	169.7	180.2
Lith	Sil	Sh-cc & Scb	Sh-cc	Sh-cc	Sh-cc	Sh-cc	ox Sh-cc	Sh-cc & Scb	Sh-cc & Scb	Sh-cc & Scb	Sil	Sil	Recry Sd	Sh-cc+ev	Sh-cc
Ident	1183	1184	1185	1186	1187	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243
SiO2	75.17	66.83	59.92	65.01	64.18	56.57	42.93	65.75	63.13	63.41	87.6	71.12	13.34	56.89	56.74
TiO2	0.34	0.41	0.45	0.51	0.55	0.82	0.58	0.67	0.68	0.82	0.01	0.51	0.13	0.61	0.69
Al2O3	8.6	9.71	9.45	11.42	12.29	13.41	11.45	16.53	14.97	15.09	0.37	11.32	2.98	13.87	13.43
Fe2O3	3.7	4.21	10.31	4.19	4.38	4.27	31.78	2.77	6.3	5.59	5.69	2.66	32.85	7.91	5.56
MnO	0.02	0.02	0.04	0.02	0.01	0.03	0.02	0.01	0.01	0.01	0.01	0.02	3.09	0.15	0.05
MgO	5.73	10.58	8.82	8.63	7.46	1.34	1.39	2.05	1.81	2.15	0.08	5.97	15.05	10.36	12.96
CaO	0.35	0.54	0.34	0.78	0.63	0.06	0.04	0.01	0.01	0.18	0.37	0.44	0.87	0.27	0.35
Na2O	0.06	0.1	<0.05	0.09	0.06	0.1	0.06	0.1	0.09	0.1	0.11	<0.05	0.07	<0.05	0.09
K2O	1.63	0.81	1.18	1.98	2.63	4.06	3.96	5.94	5.16	5.18	0.07	1.94	0.04	1.72	1.21
P2O5	0.26	0.40	0.25	0.58	0.49	0.21	0.33	0.04	0.10	0.17	0.35	0.40	0.52	0.20	0.27
BaO	0.03	0.02	0.02	0.02	0.04	0.16	0.21	0.22	0.28	0.17	-0.01	0.04	-0.01	0.03	0.03
ZnO	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
CuO	0.21	0.03	0.01	0.01	0.00	0.00	0.55	0.01	0.04	0.04	3.08	0.29	0.04	0.25	0.01
PbO	0.02	0.02	0.02	0.02	0.02	0.13	0.32	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	3.86	5.89	8.19	5.97	6.65	18.54	6.58	5.25	7.12	6.4	1.96	4.78	30.94	7.26	7.87
Total	99.97	99.54	99.03	99.22	99.37	99.69	100.23	99.36	99.70	99.30	99.69	94.71	99.92	99.53	99.27
Sulphur	0.52	0.4	5.58	0.96	1.54	1.72	1.26	0.4	1.71	0.96	3.08	0.25	0.61	0.45	0.4
Sb	1	<1	1	1	<1	2	4	<1	3	2	5	<1	1	<1	2
Sn	5	4	2	6	6	7	3	6	5	7	14	12	2	5	4
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1
Nb	11	12	12	17	14	21	15	20	24	19	<1	18	2	22	15
Zr	91	110	100	128	124	318	144	179	189	221	3	143	51	167	137
Sr	12	14	6	13	15	135	58	21	37	30	200	135	21	13	12
Ba	355	142	194	279	386	1406	1988	1979	2550	1536	30	466	22	349	275
Y	16	18	16	23	22	43	25	32	43	33	3	23	9	27	26
U	5	10	9	6	8	9	8	4	6	6	2	8	2	3	17
Rb	61	29	47	79	106	157	153	224	191	204	3	78	2	71	50
Th	9	10	12	12	12	23	12	14	17	21	<1.5	13	5	14	15
Pb	16	10	73	7	19	1081	3053	36	66	33	13	5	9	8	28
As	10	13	96	11	16	19	154	6	38	35	111	4	10	6	6
Bi	4	3	22	3	4	<2	8	<2	<2	3	10	<2	3	7	5
Zn	26	34	42	40	35	64	178	29	48	18	5	23	86	79	43
Cu	1700	155	58	72	30	47	4400	44	314	263	24600	2300	267	2000	63
Ni	13	13	98	42	39	77	26	16	31	36	8	14	13	27	22

Hole_ID	TND17	TND26	TND26	TND26	TND26	TND26	TND26	TND26	TND26	TND26	TND26	TND26	TND26	TND26	TND26
Depth_Frm	191.0	125.4	152.0	177.0	209.1	230.7	245.9	275.6	305.8	325.3	347.6	375.3	400.3	426.3	449.6
Depth_to	195.0	126.7	153.6	179.9	211.7	232.4	248.6	277.1	307.4	328.4	350.2	378.4	401.8	429.7	452.3
Lith	Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	ox Sh-cc	Scb	Scb	Sh-cc	Scb	Sh-cc	Sh-cc
Ident	1244	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201
SiO2	58.74	56.51	55.62	47.02	64.64	48.82	52.25	63.22	60.68	29.23	32.34	59.27	13.72	53.07	55.40
TiO2	0.63	1.01	0.97	1.00	1.04	0.83	0.93	1.14	1.19	0.56	0.58	0.98	0.19	0.74	0.71
Al2O3	12.76	15.25	15.02	14.98	15.80	12.83	15.93	16.68	14.77	5.97	7.39	12.53	2.53	13.57	13.28
Fe2O3	6.08	2.97	4.23	11.63	3.41	17.27	5.73	2.92	5.24	5.44	4.02	4.55	1.59	4.95	9.71
MnO	0.03	<0.01	0.01	0.02	0.01	0.02	0.02	<0.01	<0.01	0.06	0.06	0.01	0.05	0.08	0.02
MgO	7.82	1.89	1.90	1.90	1.67	1.39	1.69	2.10	3.35	3.90	4.56	3.46	6.49	5.12	1.83
CaO	0.21	0.01	0.01	<0.01	0.02	<0.01	0.06	<0.01	0.26	26.48	24.07	3.37	38.12	4.88	0.60
Na2O	<0.05	0.11	0.10	0.08	0.10	0.10	0.16	0.12	0.10	0.11	0.22	0.25	0.15	0.08	0.15
K2O	2.38	4.41	4.41	4.68	4.35	4.02	4.61	5.49	5.38	2.12	2.70	4.84	1.20	5.41	5.59
P2O5	0.16	0.02	0.04	0.03	0.11	0.04	0.28	0.05	0.21	0.23	0.17	0.19	0.16	0.19	0.08
BaO	0.07	0.10	0.12	0.12	0.15	0.13	0.27	0.18	0.21	0.08	0.12	0.20	0.16	0.15	0.15
ZnO	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.01	0.01	0.02	0.00	0.01	0.06
CuO	0.01	0.01	0.01	0.01	0.00	0.03	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00
PbO	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	10.47	17.19	16.83	18.22	8.45	14.09	17.67	7.49	8.09	24.48	22.96	9.64	35.12	11.37	11.77
Total	99.36	99.48	99.28	99.70	99.75	99.58	99.61	99.39	99.51	98.68	99.20	99.31	99.47	99.61	99.35
Sulphur	1.89	1.79	2.61	8.27	1.54	11.88	3.15	1.17	1.54	2.20	1.21	1.47	0.32	1.55	6.48
Sb	3	1	2	1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2
Sn	6	7	8	6	6	3	6	5	5	5	4	5	4	5	5
Cd	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1
Nb	17	25	23	23	22	21	26	23	23	8	11	16	4	19	15
Zr	186	320	314	392	301	365	308	313	301	147	152	266	54	167	230
Sr	9	16	39	8	82	2	149	27	11	470	333	46	381	56	12
Ba	542	1033	1109	1211	1253	1078	2461	1585	1990	670	1023	1855	1332	1446	1371
Y	25	37	30	44	100	34	130	51	41	28	16	21	11	29	40
U	5	9	8	8	6	3	9	3	4	2	4	3	2	3	5
Rb	101	172	148	147	155	133	155	188	208	86	109	200	42	226	206
Th	17	24	23	22	23	20	26	25	20	8	9	21	4	16	20
Pb	77	55	58	70	48	40	110	36	18	22	17	22	10	29	141
As	22	11	14	19	4	16	11	7	5	<3	<3	3	<3	18	44
Bi	<2	<2	<2	<2	<2	2	<2	<2	<2	<2	<2	<2	<2	<2	3
Zn	45	29	39	38	52	55	56	59	117	67	62	201	51	79	471
Cu	43	48	58	94	32	228	60	26	35	42	16	44	11	17	62
Ni	36	30	128	91	62	104	52	63	38	19	20	42	8	33	79

Hole_ID	TND26	TND26	TND26	TND26	TND26	TND26	THRD633A	THRD633A	THRD633A	THRD633A	THRD635	THRD635	THRD635	THRD635	THRD635
Depth_Frm	477.5	500.6	526.3	548.0	570.3	598.2	120.6	186.9	287	365.4	190.8	208	221.7	235	247.7
Depth_to	479.8	501.5	528.1	552.6	571.1	602.9	123.9	191.7	288.1	369.4	192.2	213.8	222.9	237.3	249.2
Lith	Sh-cc	Sh-cc	Sh-cc & Sc	Scb		Recry Sd	Sh-cc	Scbmd	Scbmd	Sh-cc	Sh-cc	Scbmd	Scbmd	Sh-cc	Sh-cc
Ident	1202	1203	1204	1205	1206	1207	1358	1359	1360	1361	1357	1356	1355	1354	1353
SiO2	46.01	59.81	45.24	35.79	33.62	42.53	63.24	43.01	40.59	52.63	64.77	28.67	21.00	60.82	62.96
TiO2	0.59	0.70	0.51	0.42	0.29	0.55	0.83	0.57	0.65	0.67	0.92	0.53	0.30	0.91	0.88
Al2O3	10.64	16.54	10.52	10.11	5.65	11.92	16.12	11.61	11.74	13.74	13.94	6.78	4.85	14.78	12.55
Fe2O3	18.45	6.37	11.51	8.15	25.51	9.65	5.31	4.73	5.03	6.62	3.21	2.93	4.17	5.47	3.48
MnO	0.13	0.03	0.60	0.61	1.54	0.47	0.28	0.18	0.10	0.15	0.01	0.17	0.26	0.01	0.05
MgO	1.58	2.61	6.30	7.91	8.26	8.88	2.48	8.20	4.43	3.57	2.34	11.70	13.25	2.00	2.82
CaO	0.26	0.18	5.57	11.71	0.77	4.40	0.25	10.01	12.87	3.79	0.41	16.29	20.25	0.08	1.88
Na2O	<0.05	0.06	0.07	0.07	<0.05	0.09	0.11	0.09	0.11	0.12	0.10	<0.05	<0.05	0.08	0.09
K2O	5.06	6.84	4.52	4.16	2.15	4.47	6.12	4.37	3.78	4.26	6.06	3.65	2.00	6.48	5.54
P2O5	0.06	0.12	0.15	0.09	0.36	0.16	0.19	0.16	0.23	0.21	0.18	0.15	0.13	0.07	0.19
BaO	0.12	0.17	0.09	0.10	0.10	0.12	0.00	0.00	0.00	0.00	0.00	0.29	0.10	0.00	0.19
ZnO	0.35	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
CuO	0.01	0.01	0.01	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PbO	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	16.30	5.98	14.53	20.69	21.55	16.91	4.46	17.59	20.41	13.73	8.19	27.19	32.34	10.04	9.05
Total	99.60	99.43	99.63	99.81	99.92	100.15	99.38	100.50	99.93	99.49	100.11	98.35	98.65	100.74	99.73
Sulphur	12.30	2.47	1.22	2.17	2.27	0.72	0.64	0.25	1.41	2.24	0.93	0.70	0.34	2.46	0.59
Sb	2	2	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2
Sn	3	5	3	4	4	4	6	3	6	<1	4	5	4	5	5
Cd	7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1
Nb	11	19	16	14	8	19	20	16	17	5	18	11	8	17	19
Zr	195	154	151	116	88	141	172	138	200	60	276	160	87	253	254
Sr	12	14	99	164	41	136	17	91	114	12	12	81	125	28	10
Ba	1204	1370	794	890	997	1145	1599	1240	1003	232	1979	2600	831	1737	1832
Y	31	36	29	28	18	32	34	23	33	37	32	21	15	34	34
U	6	5	3	2	3	2	3	5	8	9	5	2	2	3	4
Rb	176	245	180	150	85	169	246	186	180	223	211	104	76	204	243
Th	20	15	14	9	9	11	18	13	17	21	20	9	5	18	21
Pb	432	62	20	136	125	16	24	11	53	65	25	16	11	16	87
As	67	<3	<3	27	24	5	8.1	2.9	7.2	9.9	5.7	<3	<3	3.3	21.1
Bi	2	<2	<2	<2	<2	3	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zn	2800	90	143	26	64	41	22	26	72	25	96	44	31	324	73
Cu	143	42	61	21	383	27	53	19	15	42	18	23	3	15	26
Ni	140	32	25	31	35	23	29	25	31	38	43	17	12	26	43

Hole_ID	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635
Depth_Frm	254.4	265.7	275.3	283.4	289	297	309.3	317.3	329.6	340.8	346.5	352	360.3	367	378.3
Depth_to	258.1	266.3	279.2	286	291.1	300.4	312.4	321.1	330.6	341.6	348.3	352.4	360.7	367.6	378.7
Lith	Sh-cc	Sh-cc	Sh-cc	Sh-py	Sh-cc+ev	Sh-cc	Sh-cc	Sh-cc	Sil Scb	Sil Scb	Sil	Sil	Sil	Sil	Sil
Ident	1352	1351	1350	1327	1328	1329	1330	1331		1333	1334	1335	1336	1337	1338
SiO2	59.83	58.97	58.94	47.97	61.82	61.42	52.84	57.28	87.28	78.77	77.38	42.48	91.69	78.71	81.67
TiO2	0.96	0.84	0.76	0.62	0.54	0.72	0.28	0.63	0.02	0.11	0.13	0.03	0.03	0.01	0.04
Al2O3	14.03	14.34	13.17	11.06	11.31	16.9	5.54	13.06	0.54	2.17	2.28	0.36	0.83	0.39	0.84
Fe2O3	5.14	6.00	6.11	14.63	6.61	4.2	16.31	4.68	4.63	5.6	9.14	19.13	3.64	6.68	6.01
MnO	0.02	0.02	0.03	0.32	0.04	0.03	0.03	0.05	0.06	0.02	0.02	0.02	0.04	0.21	0.19
MgO	1.87	1.92	2.16	2.65	1.58	2.73	3.45	11.68	0.53	2.53	1.58	0.46	0.74	2.20	1.93
CaO	0.21	0.18	0.42	0.77	0.37	0.44	1.25	0.66	1.01	2.24	0.82	6.81	0.63	4.06	2.53
Na2O	0.07	0.07	0.07	0.06	0.06	0.08	0.13	0.08	<0.05	0.08	0.12	0.08	<0.05	<0.05	0.06
K2O	6.30	6.31	6.09	5.73	5.56	6.14	1.27	2.06	0.17	0.15	0.4	0.05	0.11	0.01	0.04
P2O5	0.09	0.10	0.30	0.26	0.11	0.22	0.75	0.25	0.25	1.64	0.5	5.07	0.21	0.55	0.5
BaO	0.00	0.00	0.27	0.41	3.20	0.85	0.07	0.08	<0.01	-0.01	0.04	0.02	0.00	0.00	-0.01
ZnO	0.00	0.00	0.00	0.10	0.04	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.00
CuO	0.00	0.00	0.00	0.00	0.36	0.09	6.71	0.03	1.93	3.05	3.77	15.86	0.00	0.00	1.59
PbO	0.02	0.02	0.02	0.02	0.04	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	10.96	10.71	12.1	15.3	8.37	6.46	9.76	8.93	1.99	3.28	3.7	6.69	1.59	7.17	4.99
Total	99.47	99.48	100.42	99.90	100.02	100.27	98.43	99.48	98.41	99.63	99.88	97.09	99.50	99.99	100.38
Sulphur	2.06	2.82	2.01	6.56	3.84	1.88	11.53	1.32	2.06	2.65	5.36	14.35	1.46	3.26	2.84
Sb	<1	2	<1	5	9	4	10	3	<1	3	1	1	<1	<1	<1
Sn	4	6	4	4	5	7	29	5	9	15	30	10	18	5	6
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	18	18	17	13	13	21	4	17	<1	2	2	<1	1	<1	<1
Zr	281	279	249	204	150	176	71	187	7	29	32	10	11	4	13
Sr	15	13	18	28	44	27	24	15	21	21	12	17	5	40	22
Ba	1936	2047	2400	3700	28700	7600	655	725	79	76	485	60	156	22	79
Y	40	44	47	43	20	31	14	25	2	14	5	5	2	5	7
U	6	6	5	7	3	4	4	9	4	31	16	7	4	6	15
Rb	230	231	231	259	144	234	55	81	7	6	15	6	4	1	2
Th	22	22	20	17	16	18	Bi int	18	2	4	4	<1.5	<1.5	<1.5	2
Pb	71	168	101	245	387	36	300	60	70	16	5	5	4	4	10
As	12.4	21.9	23.7	48	95	49	281	35	35	15	62	20	15	53	96
Bi	<2	<2	<2	<2	<2	4	183	21	8	4	7	<2	<2	3	2
Zn	75	61	47	843	252	20	115	64	29	55	46	20	10	6	19
Cu	31	31	39	69	2900	517	53600	145	15400	24400	30100	9000	8100	1300	12700
Ni	50	58	52	73	52	28	122	36	6	8	13	10	4	12	9

Hole_ID	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD635	THRD636A	THRD636A	THRD636A
Depth_Frm	378.3	390.3	397.2	415	421.7	429.2	440.1	451	461.9	470.6	484.4	492.5	184.8	201.1	210.6
Depth_to	378.7	390.7	399.7	417.6	424	431.2	442	453.2	463.7	472.9	487	495.1	185.4	202.5	212.0
Lith	Sil	Sil	Sil Scb	Sh-cc	Sil Scb	Sh-py	Sh-py	Sh-cc	Sh-cc+ev	Sil	Sh-cc	Sh-cc	ih-cc +Fe ox	Sh-cc	Sh-cc
Ident	1338A	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1266	1265	1245
SiO2	81.51	88.63	78.95	48.98	64.27	40.03	59.18	56.17	63.77	74.77	47.11	51.33	61.37	58.97	59.71
TiO2	0.14	0.05	0.28	0.55	0.28	0.25	0.17	0.56	0.31	0.22	0.45	0.55	1.22	0.86	0.87
Al2O3	3.26	0.64	5.84	12.93	7.61	4.26	3.82	11.50	7.25	5.51	8.96	12.02	16.60	13.79	15.62
Fe2O3	4.44	4.97	4.63	8.28	7.58	25.23	17.82	8.16	8.87	4.65	13.67	8.96	4.08	9.42	3.26
MnO	0.03	0.05	0.03	0.08	0.07	0.06	0.05	0.04	0.06	0.04	0.10	0.06	<0.01	0.01	0.01
MgO	4.00	0.52	4.50	18.01	10.57	6.01	5.25	14.89	9.71	7.55	12.93	16.00	2.33	2.24	2.31
CaO	1.88	0.64	0.70	0.31	1.25	2.26	1.34	0.35	1.24	1.38	2.91	0.50	0.35	0.30	0.07
Na2O	0.08	<0.05	0.05	<0.05	<0.05	0.07	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	0.07	0.10	0.12
K2O	0.06	0.14	0.84	0.01	0.01	0.01	0.01	0.08	0.01	0.01	0.01	0.06	6.25	5.56	6.26
P2O5	1.40	0.19	0.53	0.23	0.93	1.66	0.85	0.27	0.92	0.82	1.60	0.36	0.30	0.24	0.07
BaO	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.22	0.17	0.20
ZnO	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.00	0.00	0.02	0.02	0.00	0.01	0.00
CuO	0.00	1.90	0.00	0.00	0.00	0.09	0.01	0.03	0.00	0.00	0.01	0.01	0.03	0.01	0.00
PbO	0.02	0.02	0.02	0.02	0.02	0.18	0.02	0.05	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	2.70	2.06	4.17	10.17	7.11	17.03	11.15	7.47	8.22	4.82	11.83	9.77	6.94	7.99	10.77
Total	99.49	99.79	100.51	99.56	99.68	97.15	99.66	99.66	100.35	99.78	99.64	99.71	99.76	99.67	99.27
Sulphur	1.82	2.61	2.17	2.69	3.23	18.16	11.37	2.53	3.95	1.70	8.33	3.39	1.55	2.86	0.89
Sb	<1	2	2	<1	<1	6	5	1	<1	<1	<1	<1	<1	1	1
Sn	9	13	11	4	<1	4	3	3	7	1	4	3	6	5	6
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1	<1
Nb	3	1	8	16	7	5	4	8	14	5	10	14	24	17	22
Zr	26	17	61	137	66	60	49	73	113	48	95	117	347	251	250
Sr	24	7	11	6	16	42	24	14	6	21	33	7	27	13	12
Ba	91	185	1209	5	13	13	127	7	157	7	7	34	1997	1534	1850
Y	11	3	9	28	11	17	9	11	21	9	21	22	44	39	34
U	44	2	9	6	4	24	16	5	5	3	5	4	4	5	4
Rb	2	6	34	1	1	1	1	1	3	1	1	3	243	231	249
Th	2	<1.5	8	13	8	*Bi Int*	6	9	13	4	14	12	27	20	20
Pb	19	30	10	32	43	1739	504	141	67	24.7	162	38	62	51	38
As	38.3	196	47	40	34	245	212	116	28	15.6	112.5	26.5	28	35	6
Bi	4	6	6	5	6	112	19	18	9	5	14	3	<2	<2	<2
Zn	36	34	64	115	97	66	56	59	74	60	192	250	35	84	39
Cu	8400	15200	96	41	161	725	108	221	152	119.8	65	72.3	179	95	20
Ni	15	6	33	28	41	299	141	73	31	24	97	41	31	39	17

Hole_ID	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A	THRD636A
Depth_Frm	225.1	231.3	236.4	239.3	252.0	257.8	270.4	280.6	290.8	299.5	306.0	316.1	320.6	327.6	334.4
Depth_to	227.3	233.1	237.9	240.1	252.3	263.2	270.8	281.0	292.4	300.1	308.2	317.9	321.4	328.0	337.0
Lith	Sil Py	Sh-cc & Sc	Br of br-grey	Sh of br-grey	Sh-cc	Sh-cc+spots	Sil	Sil	Sil	Sil	Sh-cc	Fe Sd	Sh-cc	Sil	Sh-cc
Ident	1246	1247	1248br	1249Sh	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260
SiO2	37.69	47.92	30.30	58.15	60.75	59.49	89.37	88.37	70.72	79.36	53.85	4.97	63.29	72.96	57.92
TiO2	0.39	0.53	0.19	0.67	0.67	0.56	0.09	0.04	0.05	0.01	0.59	0.16	0.37	0.08	0.47
Al2O3	8.03	12.66	5.06	13.62	13.33	13.20	1.91	1.36	0.84	0.17	12.14	2.19	7.78	1.48	10.72
Fe2O3	22.06	13.22	25.07	8.54	5.19	4.61	3.66	2.95	7.87	5.51	7.99	29.52	9.38	13.49	7.06
MnO	0.99	1.16	2.28	0.03	0.09	0.03	0.02	0.05	0.23	0.25	0.07	1.16	0.05	0.02	0.04
MgO	5.56	6.19	13.15	3.14	6.23	11.60	1.76	1.61	2.75	2.38	15.34	11.53	9.70	1.88	14.47
CaO	1.99	0.22	0.17	0.28	1.05	0.53	0.59	1.45	4.43	3.86	0.28	11.23	0.44	1.27	0.14
Na2O	<0.05	0.07	0.07	0.08	<0.05	<0.05	0.06	0.08	0.72	0.08	<0.05	0.48	0.06	<0.05	<0.05
K2O	3.22	4.83	1.62	5.51	3.58	2.03	0.21	0.17	0.08	0.02	0.17	0.06	0.10	0.05	0.02
P2O5	0.23	0.12	0.03	0.23	0.15	0.26	0.42	0.49	0.70	0.11	0.20	0.42	0.31	0.88	0.12
BaO	0.13	0.19	0.03	0.19	0.09	0.07	-0.01	-0.01	-0.01	-0.01	0.01	0.01	0.01	0.00	0.01
ZnO	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02	0.01	0.00
CuO	0.15	0.01	0.04	0.06	0.03	0.60	1.71	1.15	3.91	2.45	0.01	0.04	0.01	0.01	0.01
PbO	0.04	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.14	0.02	0.04	0.02
Loss inc. S-	19.26	11.84	22.52	8.91	8.04	6.96	1.89	2.26	7.23	6.21	8.48	23.08	7.75	8.06	7.89
Total	99.81	98.97	100.54	99.41	99.20	99.99	101.68	99.97	99.51	100.40	99.14	84.99	99.28	100.24	98.88
Sulphur	7.47	0.51	0.17	3.97	0.87	0.91	1.46	1.11	4.50	2.48	1.81	18.66	4.26	9.07	2.15
Sb	8	1	2	5	2	<1	<1	<1	<1	<1	<1	14	2	3	<1
Sn	3	6	2	6	7	6	5	4	27	18	3	3	3	<1	5
Cd	2	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	1	<1	<1	<1
Nb	7	19	5	18	17	17	2	2	<1	<1	13	4	7	1	12
Zr	103	139	39	183	182	161	25	12	15	1	124	52	84	24	108
Sr	32	17	2	23	26	19	6	13	37	18	6	142	8	17	3
Ba	1216	1830	371	1732	854	516	73	71	32	19	79	174	66	40	10
Y	16	28	8	30	26	26	6	4	8	2	20	13	12	8	18
U	3	2	2	4	4	6	4	17	2	3	5	4	13	49	4
Rb	163	201	104	233	140	74	8	7	2	1	7	2	4	3	1
Th	10	13	3	18	17	14	4	<1.5	<1.5	<1.5	*14*	*Bi int*	11	*3*	11
Pb	427	5	18	121	13	25	11	2	6	10	190	1266	95	436	20
As	112	<3	4	110	29	24	17	8	32	23	39	1	20	95	27
Bi	<2	<2	<2	3	5	7	<2	<2	3	<2	23	145	9	20	5
Zn	99	52	47	21	61	38	33	20	51	31	54	34	163	80	36
Cu	1200	53	237	515	186	4800	13700	9200	31200	19600	143	359	75	107	51
Ni	42	12	20	95	29	27	5	2	1	2	29	86	51	74	36

Hole_ID	THRD636A	THRD636A	THRD636A	THRD636A	THRD643A	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647
Depth_Frm	341.9	346.9	351.2	357.1	341.1	232.0	242.3	247.6	254.0	262.8	270.6	278.4	284.1	286.5	294.2
Depth_to	344.0	347.8	351.7	358.0	341.8	233.8	243.1	248.1	256.0	265.0	271.8	282.0	284.2	287.7	294.8
Lith	Sh-cc	Recry Sd	Fe Sd	Sh-cc		Scb	Scb	Scb	Scb	Sh-cc	Sh-cc	Sh-cc	Sh-cc	Sh-py	py-cc
Ident	1261	1262	1263	1264	1362	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108
SiO2	58.29	54.63	35.46	52.81	38.57	38.40	13.14	28.81	22.57	61.44	57.98	58.83	54.06	17.91	28.64
TiO2	0.38	0.12	0.11	0.39	0.43	0.60	0.23	0.62	0.30	0.93	0.86	0.75	0.65	0.23	0.32
Al2O3	10.06	2.30	1.79	8.59	8.29	8.59	2.90	7.94	5.79	14.07	13.98	13.73	12.65	4.25	4.88
Fe2O3	6.54	8.92	24.47	13.27	7.59	5.19	1.27	3.19	4.57	3.22	5.22	5.07	12.99	36.25	26.79
MnO	0.06	0.15	1.59	0.06	0.55	0.21	0.06	0.20	0.31	0.04	0.01	0.04	0.05	1.87	0.94
MgO	15.29	19.06	10.52	10.49	6.96	9.04	5.95	11.32	13.57	2.84	1.81	1.91	1.49	3.73	5.37
CaO	0.32	2.17	2.67	1.85	11.99	12.59	39.08	17.14	20.51	1.77	0.23	0.40	0.11	0.43	3.68
Na2O	0.08	<0.05	0.10	0.09	0.10	0.06	0.07	0.13	0.09	0.07	<0.05	0.06	<0.05	0.03	0.09
K2O	0.01	0.01	0.01	0.01	3.52	3.99	1.61	4.49	2.43	6.47	6.69	6.61	6.07	1.96	2.30
P2O5	0.20	0.22	0.38	1.38	0.19	0.20	0.32	0.29	0.20	0.22	0.13	0.12	0.07	0.19	0.46
BaO	0.00	0.01	0.01	0.01	0.11	0.15	0.18	0.36	0.09	0.17	0.18	0.18	0.17	0.06	1.53
ZnO	0.00	0.01	0.00	0.00	0.02	0.02	0.02	0.01	0.00	0.03	0.02	0.02	0.01	2.29	0.01
CuO	0.00	0.00	0.01	1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.50
PbO	0.02	0.02	0.03	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	1.27	0.10
Loss inc. S-	8.00	10.21	21.76	8.71	21.43	20.82	34.82	25.49	30.25	8.74	12.45	11.93	11.34	27.36	23.56
Total	99.23	97.83	98.92	99.43	99.75	99.87	99.66	99.99	100.68	100.02	99.58	99.66	99.70	97.85	99.17
Sulphur	1.19	4.40	4.76	5.79	2.28	1.11	0.50	1.02	0.24	0.59	2.39	2.47	8.85	19.49	13.69
Sb	<1	<1	1	<1	1	<1	1	<1	<1	<1	1	1	2	12	12
Sn	4	2	1	12	4	4	2	4	2	4	6	5	5	<1	3
Cd	<1	<1	<1	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	50	<1
Nb	10	4	2	8	11	12	4	12	8	19	17	18	13	3	7
Zr	91	31	34	77	149	188	65	167	84	269	254	244	171	64	85
Sr	8	19	35	24	173	65	456	97	120	30	15	20	9	5	97
Ba	7	13	9	2	1074	1463	1592	3606	830	1644	1793	1758	1706	479	13700
Y	16	5	8	26	28	29	10	18	25	37	42	41	34	Pb int	18
U	3	3	2	6	5	2	1.5	2.4	1.5	4.4	6.4	6.9	5.1	3.4	2.2
Rb	1	1	1	1	130	157	50	122	99	240	236	229	217	139	79
Th	9	3	5	11	10	13	4.6	11	5.4	20.2	19.3	20.7	19.4	8.5	*Ba int*
Pb	15	210	267	16	62	32	26	15	19	16	98	118	307	11700	897
As	16	19	14	20	12.9	<3	<3	4	<3	<3	18	26	55	204	283
Bi	2	5	<2	7	3	<2	<2	<2	<2	<2	<2	<2	<2	<2	4
Zn	37	152	40	41	239	179	175	72	44	263	159	151	121	18400	85
Cu	14	34	95	14100	45	32	12	22	15	8	59	29	53	204	3933
Ni	24	24	6	67	29	27	9	20	12	23	70	116	102	97	37

Hole_ID	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647	THRD647
Depth_Frm	299.7	306.3	312.4	315.9	321.6	327.4	331.0	335.6	340.0	344.6	351.8	359.6	370.0	373.1	377.4
Depth_to	303.0	306.5	315.5	317.5	323.9	327.8	332.9	335.8	340.7	345.9	352.0	359.8	370.2	374.9	379.2
Lith	Sh-cc	Recry Sd	Sh-cc & Sc	Sh-cc	Sh-cc	Sil	Sh-cc+spots	Sil	Sh-cc	Sh-cc+ev	Sil	Sil py	Recry Sd	Sh-cc	Sil
Ident	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123
SiO2	54.61	30.57	54.19	54.96	63.50	73.30	55.18	85.60	53.94	55.94	79.16	53.54	1.09	56.66	74.68
TiO2	0.68	0.09	0.64	0.65	0.71	0.05	0.53	0.02	0.60	0.73	0.02	0.02	0.01	0.60	0.04
Al2O3	15.33	1.81	14.59	13.82	15.09	0.90	12.10	0.39	13.23	14.91	0.51	0.37	0.39	13.94	0.66
Fe2O3	8.02	20.36	8.13	7.98	3.12	6.46	6.10	4.34	4.93	5.97	9.96	15.09	35.25	7.57	7.63
MnO	0.36	1.01	0.31	0.32	0.03	0.24	0.07	0.07	0.03	0.06	0.05	0.09	3.65	0.07	0.02
MgO	3.69	7.14	5.16	4.62	6.00	2.45	15.59	0.93	15.09	9.39	0.72	0.92	18.71	12.26	0.78
CaO	0.33	9.47	0.42	1.14	0.16	3.80	0.94	1.76	0.85	0.66	0.75	5.60	1.51	0.20	3.53
Na2O	<0.05	0.12	<0.05	0.08	0.06	0.17	<0.05	0.06	0.09	0.24	0.12	0.16	0.08	0.09	0.11
K2O	6.17	0.83	5.26	4.80	4.34	0.22	0.59	0.12	1.21	3.01	0.04	0.06	0.01	1.23	0.04
P2O5	0.13	0.24	0.28	0.21	0.11	0.27	0.36	0.36	0.61	0.15	0.42	3.59	0.27	0.15	2.59
BaO	0.87	0.68	0.49	0.44	0.12	0.01	0.01	<0.01	0.03	0.08	<0.01	0.01	<0.01	0.07	<0.01
ZnO	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01
CuO	0.01	0.24	0.01	0.05	0.01	4.33	0.95	2.97	0.01	0.03	2.88	12.74	0.05	0.01	6.06
PbO	0.00	0.14	0.01	0.01	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	9.72	18.63	10.22	10.31	6.25	7.19	8.39	3.48	8.48	7.80	4.70	6.30	37.29	7.01	3.21
Total	99.92	91.33	99.76	99.40	99.50	99.42	100.82	100.10	99.11	98.96	99.33	98.52	98.31	99.86	99.36
Sulphur	2.03	12.27	2.10	2.77	0.51	4.12	1.28	2.94	1.15	2.35	6.09	10.95	0.16	0.10	5.04
Sb	3	13	4	2	1	<1	1	2	5	5	2	<1	1	<1	<1
Sn	5	2	5	8	17	5	10	11	6	7	28	77	1	14	34
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	3	<1	<1
Nb	19	3	21	25	1	5	16	<1	16	21	1	<1	2	23	<1
Zr	164	30	184	202	12	20	146	5	157	176	6	<1	8	172	7
Sr	34	494	70	13	73	15	14	20	11	13	16	91	15	8	40
Ba	7969	6225	4153	979	84	47	102	49	317	872	42	32	13	668	45
Y	32	12	30	39	4	18	22	3	21	33	3	24	3	27	21
U	4.9	1.5	4.5	6.4	3.6	2.2	6	4	8	4	2	178	2	5	57
Rb	226	21	192	165	8	48	22	5	44	116	1	3	1	48	2
Th	14.7	5.4	14.6	18.1	1.8	3.3	15	<1.5	15	17	<1.5	<1.5	3	15	1
Pb	51	1164	80	8	109	12	28	74	54	19	4	25	<1.5	3	11
As	37	325	124	24	105	<3	23	50	40	36	119	11	<3	<3	<3
Bi	<2	<2	4	<2	23	<2	4	11	9	15	3	2	<2	<2	4
Zn	21	46	64	24	92	35	48	68	50	29	24	152	15	51	69
Cu	95	1802	310	11	34600	8	7600	23700	51	116	23630	101800	63	66	48400
Ni	36	16	34	24	14	6	23	11	37	33	28	<1	2	17	7

Hole_ID	THRD647	THRD647	THRD647	THRD647	THRD649	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752
Depth_Frm	393.1	400.2	406.4	409.3	278.4	191.1	200.5	213.1	218.9	228.8	239.6	244.2	250.3	256.3	262.0
Depth_to	393.4	400.5	406.6	410.7	282	192.9	201.4	214.2	221.0	231.0	243.2	245.7	250.7	256.6	264.7
Lith	Sh-cc	Sh-py	Sil	Sh-cc		Scb	Scb	Sh-cc	Sh-cc	Sh-cc	Sh-cc	Sh-cc	Py-sh	Recry Sd	Sh-cc
Ident	1124	1125	1126	1127	1363	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048
SiO2	54.19	65.58	67.89	40.38	57.89	31.71	27.52	61.64	56.31	59.30	56.60	54.62	24.51	74.21	56.57
TiO2	0.55	0.06	0.04	0.49	0.94	0.40	0.35	0.83	0.94	0.84	0.73	0.75	0.22	<0.01	0.63
Al2O3	12.31	1.29	0.77	12.39	14.83	8.10	6.49	16.36	14.39	14.41	13.82	13.18	3.37	0.11	15.19
Fe2O3	7.07	16.21	10.76	12.34	6.19	4.31	5.04	4.48	7.62	5.85	6.52	8.04	30.59	4.09	7.72
MnO	0.07	0.13	0.11	0.09	0.03	0.25	0.30	0.01	0.02	0.02	0.04	0.10	1.46	0.43	0.20
MgO	16.77	2.54	1.55	17.31	2.53	10.93	11.46	2.41	1.85	1.78	1.72	1.76	7.57	4.60	3.53
CaO	0.39	2.31	7.54	2.45	0.50	15.94	18.06	0.17	0.23	0.18	0.08	0.13	3.45	7.61	0.17
Na2O	<0.05	<0.05	<0.05	<0.05	0.09	0.06	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05
K2O	0.04	0.02	0.06	0.02	6.41	3.30	2.80	7.08	6.66	6.52	6.70	6.54	1.19	0.04	5.88
P2O5	0.28	0.55	4.51	1.78	0.19	0.19	0.22	0.12	0.15	0.12	0.07	0.10	0.37	0.05	0.09
BaO	<0.01	<0.01	0.01	0.00	0.23	0.10	0.10	0.18	0.21	0.20	0.25	0.25	0.31	0.09	0.82
ZnO	0.01	0.01	0.01	0.04	0.01	0.00	0.01	0.00	0.04	0.01	0.00	0.01	0.01	0.01	0.00
CuO	0.01	0.04	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.50	0.49	0.01
PbO	0.02	0.04	0.03	0.04	0.02	0.00	0.00	0.00	0.02	0.01	0.01	0.03	0.12	0.03	0.00
Loss inc. S-	8.55	10.23	7.09	12.04	10.55	24.40	27.10	6.50	11.20	10.80	12.80	13.80	23.50	8.60	9.20
Total	100.23	99.00	100.37	99.38	100.39	99.69	99.53	99.78	99.64	100.05	99.34	99.31	97.24	100.37	100.01
Sulphur	1.48	11.75	7.22	5.41	2.63	0.13	0.40	1.62	4.03	2.79	3.09	3.57	14.36	1.92	2.84
Sb	1	10	2	3	2	<1	<1	<1	2	<1	1	3	13	3	3
Sn	4	2	2	3	4	3	5	5	5	6	5	5	1	2	5
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	3	<1	<1
Nb	18	1	2	12	19	10	10	22	19	18	19	18	4	<1	17
Zr	144	18	9	104	277	92	102	200	262	259	233	278	69	1	144
Sr	9	23	66	36	19	112	122	10	13	13	13	13	154	194	19
Ba	25	30	79	30	2200	1072	926	1669	1867	1785	2436	2188	2904	865	7527
Y	20	6	17	30	42	22	20	31	50	39	34	38	14	1	28
U	5	11	15	34	5	2.4	2.2	3.5	5.1	6.6	7.1	9.3	2.7	1.5	3.3
Rb	2	1	2	1	248	144	107	283	239	238	233	222	73	1	224
Th	14	2	2	15	21	8.7	7.8	18.6	21.6	23.4	20.8	22	3.9	<1.5	13.9
Pb	19	360	314	389	76	11	13	72	154	100	134	254	1113	315	68
As	132	182	194	135	24.3	<3	<3	13	26	25	25	23	271	55	43
Bi	2	47	15	24	<2	<2	<2	<2	<2	<2	<2	<2	3	5	<2
Zn	80	18	25	297	105	54	72	55	257	78	36	105	126	120	17
Cu	31	329	128	122	40	17	11	27	74	45	35	38	4074	3900	76
Ni	26	47	84	68	53	16	11	38	81	69	66	295	20	9	33

Hole_ID	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752
Depth_Frm	269.1	274.1	279.0	286.0	293.7	298.5	302.5	308.6	315.5	321.4	330.1	338.6	343.9	351.2	352.7
Depth_to	269.5	274.3	281.0	290.0	294.0	300.1	302.7	308.8	316.1	321.8	330.6	338.8	344.0	352.7	353.8
Lith	Recry Sd	Sil	Sh-cc	Sh-cc	Sil	Sh-cc+spots	Sil Scb	Sil	Sh-cc+ev	Sil	Sil Scb	Fe Sd	Sil	Sh-cc	Recry Sd
Ident	**1049**	**1050r**	**1051**	**1052**	**1053**	**1054**	**1055**	**1056**	**1057**	**1058**	**1059r**	**1060r**	**1061r**	**1062**	**1063**
SiO2	16.04	73.26	51.56	59.53	83.85	53.39	87.59	89.14	58.21	83.92	75.68	0.33	78.18	65.08	47.65
TiO2	0.10	0.03	0.61	0.66	0.21	0.55	0.03	0.05	0.75	0.01	0.01	0.02	0.02	0.42	0.73
Al2O3	1.17	0.79	13.34	14.36	3.96	12.64	0.57	1.26	15.08	0.42	0.21	0.12	0.60	8.23	13.29
Fe2O3	14.98	6.89	8.59	4.94	4.24	7.02	4.90	1.96	4.63	4.89	9.30	35.34	7.86	7.49	10.79
MnO	1.62	0.47	0.56	0.06	0.03	0.09	0.06	0.02	0.04	0.10	0.16	3.38	0.03	0.08	0.09
MgO	9.48	2.81	7.45	8.79	2.78	14.87	0.56	1.08	10.15	1.19	1.39	18.64	0.65	9.91	13.94
CaO	13.86	4.08	0.23	0.71	0.37	0.60	0.94	1.30	0.36	3.47	2.88	2.42	1.97	0.94	1.41
Na2O	0.18	0.08	<0.05	<0.05	<0.05	0.06	0.03	0.06	0.07	<0.05	0.07	0.07	0.12	<0.05	0.12
K2O	0.60	0.26	4.39	3.16	0.68	0.83	0.15	0.19	2.88	0.05	0.02	<0.01	0.05	0.05	0.78
P2O5	0.48	0.73	0.14	0.28	0.23	0.15	0.25	0.72	0.15	1.41	0.77	0.30	1.35	0.55	0.97
BaO	7.58	0.02	0.15	0.07	0.00	0.06	0.00	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.06
ZnO	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
CuO	0.63	1.97	0.13	0.03	0.56	0.04	2.82	1.16	0.00	0.96	2.18	0.00	4.69	0.19	0.03
PbO	0.37	0.01	0.00	0.00	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Loss inc. S-	16.90	8.00	12.36	6.78	3.03	9.25	2.20	1.72	7.37	3.86	6.59	37.26	3.79	6.94	9.61
Total	85.02	99.40	99.51	99.36	99.96	99.55	100.08	98.70	99.76	100.28	99.26	97.88	99.31	99.88	99.49
Sulphur	7.98	2.21	0.64	0.58	1.56	1.71	2.58	0.95	0.97	2.14	5.26	0.30	4.98	1.35	2.29
Sb	3	1	1	<1	<1	2	2	1	4	1	<1	1	2	1	3
Sn	2	4	5	5	8	4	10	4	7	8	19	<1	35	4	5
Cd	16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	2	1	21	21	4	18	<1	<1	23	<1	<1	<1	<1	10	22
Zr	22	8	173	178	65	159	8	13	188	5	2	8	6	110	278
Sr	1219	120	17	24	12	16	12	13	8	43	17	12	26	21	28
Ba	67900	338	1419	593	145	573	43	259	705	41	67	10	54	64	579
Y	12	10	31	42	7	26	3	7	33	10	6	3	9	18	51
U	1.5	4.1	3	4.4	2.7	4.8	2.3	5.9	5.7	30	1.6	1.5	8.7	13.2	13.5
Rb	13	11	170	119	26	31	6	8	112	2	1	1	2	2	32
Th	*Ba int*	*<1.5*	13.3	16.7	6.9	14.6	2.6	<1.5	17.1	<1.5	<1.5	<1.5	<1.5	11.2	*19.1*
Pb	3400	128	17	29	180	66	56	17	18	12	8	1	7	38	164
As	208	117	19	24	166	48	43	<3	27	48	98	0	25	63	193
Bi	3	38	<2	<2	20	21	21	2	8	3	7	<2	5	12	27
Zn	8300	49	18	35	17	67	53	50	37	16	60	15	45	58	108
Cu	5088	15700	861	207	4500	281	22500	9300	20	7700	17400	72	37600	1077	172
Ni	11	15	20	27	17	35	8	8	29	9	23	1	14	21	30

Hole_ID	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD752	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753
Depth_Frm	359.3	365.9	369.5	375.6	382.2	390.3	390.3	394.6	225.2	232.1	240	249.6	258.4	268.3	277.5
Depth_to	359.5	367.0	369.9	376.9	382.4	392.3	392.3	394.8	226.0	232.6	241.2	253.6	260.4	270.8	279.3
Lith	Sil	Sh-cc	Sil	Sil	Sil	Sh-cc+ev	Sh-cc+ev	Fe Sd	ox Scb	Scb	Scb	Scb	Scb	Scb	Scb
Ident	1064	1065	1066	1067	1068	1069	1069	1070r	1267	1268	1269	1270	1271	1272	1274
SiO2	92.78	50.58	84.52	71.41	71.09	49.78	49.78	7.12	4.86	15.62	20.23	38.30	19.98	28.33	42.15
TiO2	<0.01	0.47	0.02	0.29	0.29	0.41	0.41	0.09	0.27	0.46	0.32	0.47	0.45	0.70	0.54
Al2O3	0.60	10.12	0.58	6.04	6.77	10.16	10.16	1.28	2.65	5.64	4.67	10.03	5.80	8.53	10.86
Fe2O3	2.17	11.74	8.48	6.02	4.08	13.72	13.72	31.86	54.61	3.01	2.98	3.77	3.45	3.74	3.48
MnO	0.07	0.12	0.02	0.04	0.08	0.08	0.08	2.83	4.74	0.26	0.26	0.22	0.26	0.20	0.17
MgO	0.60	13.78	0.55	8.04	9.34	13.73	13.73	17.40	0.85	15.19	15.58	9.25	14.56	11.72	8.12
CaO	1.05	1.15	0.89	1.60	1.94	0.81	0.81	2.95	0.41	20.75	21.67	12.70	20.96	15.97	11.03
Na2O	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	0.09	0.12	0.19	0.22	0.11
K2O	0.06	0.05	0.09	0.01	0.02	0.02	0.02	<0.01	0.76	2.47	2.17	4.07	2.79	4.14	4.56
P2O5	0.32	0.62	0.48	1.13	1.03	0.33	0.33	0.27	0.13	0.15	0.12	0.12	0.19	0.30	0.17
BaO	0.00	0.00	0.00	-0.01	0.01	0.00	0.00	0.00	0.07	0.17	0.12	0.17	0.22	0.33	0.18
ZnO	0.00	0.02	0.01	0.01	0.05	0.04	0.04	0.01	0.81	0.01	0.00	0.00	0.01	0.00	0.00
CuO	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
PbO	0.00	0.04	0.03	0.01	0.00	0.08	0.08	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	1.85	11.06	4.69	6.19	5.22	10.52	10.52	33.24	29.76	*32.31*	31.76	20.19	30.14	23.74	18.76
Total	99.50	99.77	100.37	100.78	99.92	99.68	99.68	97.15	99.93	96.05	99.98	99.41	99.00	97.93	100.13
Sulphur	1.03	5.43	6.15	2.61	0.86	5.11	5.11	1.84	0.48	0.57	0.48	0.48	1.10	1.38	0.36
Sb	1	7	9	3	<1	2	2	<1	<1	<1	<1	<1	<1	<1	<1
Sn	1	4	2	2	2	3	3	2	<1	5	4	4	3	5	4
Cd	<1	<1	<1	1	<1	<1	<1	<1	5	<1	<1	<1	<1	<1	<1
Nb	<1	12	1	8	9	11	11	3	7	12	7	13	11	13	12
Zr	2	108	8	75	70	95	95	43	97	157	108	105	156	198	123
Sr	19	18	9	28	73	18	18	42	16	99	88	76	106	87	86
Ba	67	60	122	17	79	25	25	12	622	1704	1244	1690	2100	3100	1609
Y	2	20	3	15	15	17	17	9	36	17	14	20	14	19	25
U	15.5	18.5	24.6	45.2	32.9	4.3	4.3	1.5	2	3	2	2	2	3	2
Rb	2	2	4	1	1	1	1	1	34	109	86	170	94	153	188
Th	<1.5	*12.7*	*<1.5*	7.9	5.9	*10.3*	*10.3*	2.8	9	10	7	10	10	13	11
Pb	44	358	245	111	36	434	434	243	34	43	12	21	23	24	8
As	62	442	453	111	28	92	92	20	<3	<3	<3	4	<3	12	4
Bi	4	31	23	8	4	20	20	3	<2	<2	<2	<2	<2	<2	<2
Zn	13	216	107	122	347	283	283	85	6500	101	61	44	74	58	32
Cu	42	155	135	45	23	50	50	103	21	22	11	28	9	26	22
Ni	25	58	34	37	18	40	40	5	185	10	12	18	17	24	16

Hole_ID	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753
Depth_Frm	292.1	297	309.5	317	321	328.7	331.1	336.3	339.6	349.6	361.2	362.3	370	381.1	385
Depth_to	294	298.4	312	318.9	323.2	329.6	333	336.8	341.5	350.6	361.4	365	370.4	381.5	386.8
Lith	Sh-cc	Sh-cc	Sh-cc	Sh-cc	Sil Py	Sh of br-grey	Br of br-grey	Recry Sd	Sh-cc	Sh-cc+spots	Sil	Sh-cc	Sil	Sil	Fe Sd
Ident	1275		1277	1278		1280Sh	1281Br	1282	1283	1284	1285	1286	1287	1288	1289
SiO2	57.57	62.17	57.78	51.20	38.75	50.49	14.35	21.95	60.55	67.21	82.68	53.95	87.55	87.91	5.06
TiO2	0.93	0.74	0.84	0.75	0.45	0.57	0.12	0.12	0.71	0.38	0.11	0.54	0.04	0.05	0.13
Al2O3	14.49	15.57	14.19	12.51	8.98	13.90	3.25	0.76	14.88	7.53	2.10	12.89	0.87	1.03	3.41
Fe2O3	7.03	4.18	7.90	8.32	23.47	10.85	31.46	15.06	5.06	6.26	6.10	4.98	4.43	4.05	25.63
MnO	0.02	0.01	0.04	0.12	1.52	0.80	2.40	1.35	0.10	0.08	0.02	0.05	0.07	0.02	2.12
MgO	2.02	1.82	1.68	1.69	4.48	4.59	15.66	8.23	3.09	7.06	1.34	16.38	0.97	0.87	24.86
CaO	0.27	0.11	0.19	0.16	0.45	0.22	0.50	7.23	0.37	1.10	1.15	0.30	0.98	1.64	2.36
Na2O	0.06	0.12	<0.05	0.35	0.10	<0.05	0.35	0.45	0.07	0.16	0.32	0.23	<0.05	0.06	0.06
K2O	6.79	6.78	6.92	5.87	3.67	5.43	0.98	0.06	5.17	0.77	0.32	0.51	0.11	0.13	0.00
P2O5	0.12	0.07	0.16	0.11	0.17	0.12	0.12	0.07	0.27	0.48	0.81	0.12	0.27	1.07	0.30
BaO	0.19	0.20	0.19	0.17	0.16	0.36	0.03	14.34	0.84	0.22	0.00	0.02	-0.01	0.00	-0.01
ZnO	0.02	0.01	0.01	1.85	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CuO	0.00	0.00	0.00	0.00	0.09	0.00	0.01	0.45	0.03	1.73	3.22	0.00	1.39	1.60	0.01
PbO	0.02	0.02	0.02	0.04	0.05	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	9.92	8.29	9.92	16.48	17.73	12.11	30.77	14.41	8.15	5.82	2.52	9.24	2.15	1.56	35.08
Total	99.44	100.08	99.89	99.63	100.07	99.49	100.01	84.52	99.28	98.80	100.69	99.22	98.82	99.99	99.01
Sulphur	3.16	1.80	4.04	4.03	6.20	0.99	1.79	7.00	1.90	1.58	3.05	0.63	1.59	1.58	0.92
Sb	2	<1	1	2	1	<1	2	<1	3	<1	1	1	1	<1	<1
Sn	5	7	4	5	3	5	2	2	6	11	22	3	12	13	<1
Cd	<1	<1	<1	42	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	18	19	18	16	12	17	4	2	23	8	2	17	<1	1	6
Zr	263	259	251	258	127	151	35	13	211	110	32	148	12	15	44
Sr	14	10	15	14	13	20	19	1406	28	45	16	9	8	18	24
Ba	1790	1772	1788	1796	1395	3300	485	129600	7500	2100	123	160	40	202	20
Y	44	43	49	31	18	33	14	4	35	22	8	20	3	8	10
U	5	5	6	10	4	5	2	2	6	4	17	5	4	31	2
Rb	247	238	231	209	159	209	55	2	211	30	12	19	4	5	1
Th	20	22	21	20	12	13	3	Ba int	19	11	3	13	2	3	4
Pb	123	75	195	373	460	28	31	250	69	18	33	28	3	5	2
As	31	11	39	20	30	15	20	86	76	5	14	28	13	4	16
Bi	<2	<2	3	<2	<2	<2	<2	Ba int	6	2	4	4	<2	<2	<2
Zn	222	74	71	14900	123	42	30	90	21	57	45	44	15	22	26
Cu	29	21	38	30	623	49	109	3600	204	13800	25700	67	111	12800	78
Ni	78	39	95	45	37	26	23	9	34	15	7	29	6	3	5

Hole_ID	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD753	THRD772A	THRD772A	THRD778A
Depth_Frm	392.1	400.8	412.8	420.1	429.8	436.2	440.9	446.8	449	458.6	462	465	137.4	253.3	255.6
Depth_to	392.8	401.8	413.7	420.5	432.3	437.9	443.5	447.3	450.8	459	462.4	466.1	137.9	256.8	
Lith	Sil	Sil Scb	Sil	Sil Scb	Sh-cc	Sil Scb	Sh-cc		Sh-cc		Py-Sh	Sh-cc			
Ident	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1364	1365	1366
SiO2	61.68	84.85	97.52	82.46	52.75	70.37	55.84	54.97	46.99	75.75	27.88	56.48	58.34	55.24	61.16
TiO2	0.02	0.11	<0.01	0.03	0.41	0.20	0.44	0.05	0.51	0.09	0.02	0.46	0.69	0.77	0.52
Al2O3	0.34	2.26	0.13	0.83	9.25	5.19	9.65	1.58	11.08	2.22	1.05	10.44	13.82	14.96	11.95
Fe2O3	18.74	4.59	1.44	7.71	12.03	7.75	9.66	24.10	12.01	11.88	38.01	7.09	5.46	5.72	5.89
MnO	0.02	0.07	0.02	0.08	0.07	0.04	0.05	0.03	0.06	0.03	0.06	0.05	0.03	0.03	0.01
MgO	0.36	2.49	0.15	1.53	13.15	7.08	13.10	2.21	15.42	2.80	2.02	14.41	8.27	9.30	1.47
CaO	2.49	0.46	0.24	1.55	0.52	1.41	0.47	1.46	0.46	0.33	1.69	0.25	0.20	0.15	1.41
Na2O	0.18	0.12	<0.05	<0.05	<0.05	<0.05	0.08	0.15	0.07	<0.05	<0.05	0.06	0.09	0.09	0.07
K2O	0.04	0.15	0.04	0.04	0.01	0.01	0.05	0.03	0.08	0.06	0.05	0.02	2.36	2.49	4.39
P2O5	1.85	0.29	0.05	0.48	0.33	1.04	0.35	1.07	0.34	0.10	0.65	0.20	0.15	0.11	1.05
BaO	0.00	0.00	0.01	0.00	0.00	-0.01	0.02	-0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.12
ZnO	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.02	0.00	0.10	0.02	0.00	0.00	0.00
CuO	5.11	1.10	0.04	0.65	0.01	0.01	0.00	0.04	0.01	0.01	0.11	0.00	0.00	0.00	0.04
PbO	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.12	0.02	0.02	0.02	0.02
Loss inc. S-	7.44	2.73	0.13	4.85	11.02	6.68	9.51	13.06	12.07	6.63	22.87	9.92	10.23	10.60	12.13
Total	98.28	99.22	99.77	100.19	99.59	99.80	99.27	98.77	99.16	99.94	94.68	99.40	99.63	99.47	100.21
Sulphur	12.40	1.31	0.09	4.65	5.85	4.10	4.74	17.23	6.59	7.94	29.16	3.00	1.85	1.48	2.93
Sb	4	3	<1	2	2	1	2	7	3	2	25	1	2	<1	3
Sn	40	10	<1	5	3	3	4	<1	4	2	3	4	8	5	4
Cd	<1	1	<1	1	<1	<1	<1	<1	<1	<1	2	<1	<1	<1	<1
Nb	<1	3	<1	<1	11	5	13	2	13	2	<1	12	17	19	17
Zr	3	22	1	7	99	46	106	14	108	19	4	105	253	262	151
Sr	28	10	3	22	10	19	7	17	7	5	26	5	15	10	105
Ba	45	110	70	66	14	21	62	46	88	42	35	26	1080	646	1174
Y	16	5	1	4	18	11	14	9	20	3	5	16	29	36	49
U	33	6	5	7	3	35	9	54	4	7	7	6	8	10	4
Rb	1	6	2	2	1	1	2	1	3	3	3	1	118	118	159
Th	<1.5	3	<1.5	<1.5	9	6	11	3	14	3	<1.5	11	21	23	15
Pb	11	23	8	133	237	159	35	333	186	178	1151	58	25	37	101
As	155	81	22	239	98	101	22	257	32	195	1	48	7.1	13.3	118
Bi	6	8	<2	17	13	10	7	17	7	15	112	3	2	4	<2
Zn	57	31	1	29	100	74	122	36	227	49	992	189	34	39	13
Cu	40800	8800	330	5200	145	88	26	252	109	139	816	33	45	20	278
Ni	39	6	2	25	29	31	29	55	44	36	439	30	55	48	83

Hole_ID	THRD778A	THRD778A	THRD778A	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781
Depth_Frm	309.5	340.2	375.6	210.4	219.3	229.9	237.9	249.6	259.1	268.2	282.3	290.1	290.5	301.2	312.6
Depth_to				213.8	221	231	240.7	250.9	262.4	271.1	285	290.7	290.7	301.6	313.1
Lith				Sh-cc	Sh-cc	Sh-cc	Sh-cc	Sh-cc	Sil Py	Sh-cc	Sh-cc	Br of br-grey	Sh of br-gey	Sil Scb	Sh-cc
Ident	1367	1368	1369	1302	1303	1304	1305	1306	1307	1308	1309	1311Br	1310Sh	1312	1313
SiO2	52.67	55.26	59.38	61.57	59.10	58.59	59.65	52.77	25.28	52.80	53.79	27.01	64.78	85.93	60.24
TiO2	0.69	0.60	0.53	0.95	0.90	0.79	0.81	0.67	0.18	0.58	0.69	0.24	0.55	0.09	0.47
Al2O3	16.36	14.10	12.48	14.31	15.81	14.35	13.23	13.47	3.41	13.58	15.37	6.15	14.68	1.89	11.36
Fe2O3	4.83	5.72	7.31	5.35	4.16	7.12	6.11	9.44	33.31	10.49	9.40	22.45	4.38	3.34	5.88
MnO	0.05	0.07	0.03	0.01	0.01	0.04	0.12	0.38	2.99	0.78	0.29	1.63	0.02	0.09	0.05
MgO	13.49	12.69	10.15	1.77	1.96	1.71	1.98	1.87	6.93	4.49	3.66	14.82	2.49	1.48	10.55
CaO	0.21	1.11	0.52	0.15	0.03	0.29	0.54	0.45	0.75	0.26	0.23	0.21	0.40	2.07	0.33
Na2O	0.10	0.08	0.07	0.08	0.08	0.09	0.12	0.08	<0.05	<0.05	0.07	0.22	0.09	<0.05	0.06
K2O	2.66	1.87	1.70	6.12	6.32	6.01	6.14	6.25	1.30	5.99	6.13	2.11	5.58	0.72	1.49
P2O5	0.16	0.18	0.40	0.15	0.07	0.26	0.40	0.33	0.27	0.12	0.17	0.07	0.19	0.43	0.25
BaO	0.00	0.04	0.06	0.15	0.18	0.16	0.17	0.18	0.02	0.18	0.35	0.17	0.51	0.03	0.04
ZnO	0.00	0.01	0.00	0.01	0.00	0.01	0.02	0.05	0.01	0.00	0.00	0.00	0.00	0.00	0.00
CuO	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.04	0.00	0.03	0.01	0.05	0.81	0.10
PbO	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	8.37	8.43	7.36	10.14	11.22	10.45	10.36	13.84	24.68	10.61	9.51	26.09	6.12	3.35	8.70
Total	99.58	100.16	99.98	100.75	99.84	99.88	99.65	99.81	99.22	99.93	99.68	101.18	99.84	100.22	99.52
Sulphur	0.17	0.75	2.27	2.24	1.89	3.81	2.44	4.38	5.51	0.70	2.82	0.28	1.43	0.85	1.07
Sb	1	<1	1	2	<1	2	<1	3	<1	<1	3	<1	1	1	2
Sn	6	4	6	5	6	5	6	5	2	4	5	3	4	3	5
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	25	18	14	19	21	17	18	16	6	17	22	9	14	2	13
Zr	201	148	115	292	288	258	246	213	64	149	174	71	138	26	125
Sr	13	34	16	37	31	31	26	40	36	21	23	10	34	56	12
Ba	376	339	391	1403	1548	1385	1520	1604	303	1595	3150	1600	4700	318	310
Y	34	30	30	44	43	50	55	57	15	29	30	17	25	9	23
U	5	4	7	5	7	6	4	7	2	3	3	2	3	2	5
Rb	104	78	70	227	236	229	235	234	86	216	243	88	230	34	52
Th	17	14	12	22	23	22	22	19	6	15	14	6	11	3	11
Pb	8	35	22	113	94	149	130	328	386	27	99	9	69	31	68
As	<3	8.3	14.9	15	10	26	17	19	8	5	62	24	91	34	31
Bi	<2	<2	5	<2	<2	<2	<2	3	<2	<2	2	<2	<2	5	9
Zn	40	114	40	64	45	124	187	408	88	29	17	41	44	34	42
Cu	9	45	15	48	22	66	46	34	284	32	199	104	362	6700	355
Ni	19	27	63	48	52	81	47	77	15	20	52	22	44	11	30

Hole_ID	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD781	THRD782	THRD782
Depth_Frm	320.2	330.6	341.7	350.4	361.4	374.4	384.4	388.5	396.7	400.8	415.3	428.9	437.2	230.2	320.2
Depth_to	320.5	331.1	342.5	350.8	362.8	376.4	384.8	389.2	398.6	403.1	416.3	431.7	439.4		
Lith	Sil	Sil	Fe Sd	Sil	Sh-cc	Sh-cc	Sil	Sil	Sil	Sil	Sil	Sh-cc	Sh-cc		
Ident	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1370	1371
SiO2	91.12	78.56	1.68	61.79	55.99	60.58	75.51	80.35	77.07	77.96	74.67	58.89	55.69	26.30	24.91
TiO2	0.02	0.01	0.02	0.55	0.48	0.60	0.15	0.02	0.19	0.06	0.30	0.42	0.47	0.46	0.92
Al2O3	0.48	0.30	0.38	12.08	11.41	12.73	2.97	0.45	4.41	1.34	6.54	9.76	11.39	5.38	9.86
Fe2O3	3.01	8.42	36.58	5.90	6.53	4.04	5.33	8.83	4.85	8.60	4.80	7.96	7.04	3.95	3.83
MnO	0.03	0.15	3.55	0.05	0.12	0.02	0.10	0.07	0.02	0.02	0.02	0.04	0.04	0.07	0.16
MgO	0.38	1.60	17.59	10.19	13.43	10.26	4.26	0.73	3.51	1.23	7.01	13.07	15.28	3.39	12.10
CaO	0.93	2.46	1.13	0.38	1.20	0.28	2.62	1.37	1.79	1.21	0.49	0.35	0.15	29.06	13.83
Na2O	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	0.06	0.13	<0.05	0.06	<0.05	0.09	0.06	<0.05	<0.05
K2O	0.15	0.07	0.05	1.67	0.76	2.27	0.20	0.06	0.61	0.14	0.50	0.10	0.19	1.93	4.75
P2O5	0.42	0.08	0.69	0.23	0.23	0.22	0.71	0.58	1.33	0.82	0.36	0.26	0.12	0.15	0.31
BaO	-0.01	-0.01	-0.01	0.03	0.02	0.04	-0.01	-0.01	0.02	<0.01	0.02	0.01	0.01	0.10	0.29
ZnO	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.01	0.01
CuO	1.35	2.43	0.01	0.04	0.18	0.11	2.08	1.98	2.19	4.56	1.18	0.01	0.01	0.00	0.00
PbO	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	1.67	5.59	37.84	6.78	9.21	7.65	5.94	4.23	3.16	3.50	4.39	8.59	8.85	26.05	23.44
Total	99.69	99.71	99.56	99.69	99.56	98.87	99.92	98.79	99.15	99.50	100.28	99.57	99.33	96.85	94.41
Sulphur	1.35	3.25	0.19	0.65	0.65	0.92	2.07	4.66	1.85	4.87	1.81	3.46	2.33	1.13	1.49
Sb	<1	1	<1	1	<1	2	1	<1	1	<1	<1	<1	<1	1	<1
Sn	5	14	2	7	7	10	15	20	17	40	18	3	5	3	5
Cd	<1	<1	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	<1	<1	<1	16	15	18	3	<1	5	<1	8	13	15	8	18
Zr	5	3	11	151	136	145	46	5	46	14	72	102	129	127	253
Sr	22	33	33	13	20	10	40	21	35	14	9	5	5	551	81
Ba	51	41	27	344	155	444	67	24	316	73	189	58	117	680	2600
Y	3	1	7	23	22	25	8	4	14	8	10	22	20	30	22
U	3	2	2	5	5	7	5	6	58	14	11	5	5	2	4
Rb	6	2	3	60	27	86	7	2	24	5	20	4	7	77	178
Th	<1.5	<1.5	<1.5	14	12	14	5	<1.5	4	3	7	10	12	7	16
Pb	39	20	2	26	57	40	16	4	8	14	10	17	18	23	37
As	34	54	<3	17	12	28	14	79	<3	20	47	19	71	<3	4.8
Bi	5	5	3	11	7	11	<2	4	<2	3	2	4	4	<2	<2
Zn	1077	36	21	38	49	35	46	31	52	69	48	93	199	67	87
Cu	10800	19400	70	247	1400	750	16600	15800	17500	36400	9400	76	59	28	25
Ni	4	10	3	24	29	33	6	25	5	4	13	24	23	20	33

Hole_ID	THRD782	THRD782	THRD785	THRD785	THRD785	THRD785	THRD790	THRD790	THRD790	THRD790	THRD790
Depth_Frm	359	446.1	160.5	215	294.1	356.5	206.8	240.8	303.7	401.3	546.5
Depth_to		448.7	160.3	217.1	297.7	359.1	210.8	241.2	307.2	403	549.1
Lith			Sh-cc	Sh-cc	Sh-cc	Sil Scb				Scbmd	
Ident	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382
SiO2	38.56	63.58	58.20	61.71	66.87	70.79	44.62	31.46	27.69	27.16	41.00
TiO2	0.63	0.62	0.74	0.73	0.79	0.70	0.35	0.28	0.20	0.25	0.36
Al2O3	8.68	13.99	15.49	14.80	15.24	12.23	7.54	6.41	4.13	5.66	8.31
Fe2O3	4.33	2.65	5.95	4.61	3.87	4.43	3.76	3.08	2.29	3.20	4.29
MnO	0.16	0.03	0.02	0.01	0.02	0.02	0.11	0.08	0.07	0.09	0.31
MgO	8.70	7.17	4.64	2.28	3.77	5.42	12.94	9.25	14.03	15.09	5.37
CaO	12.07	0.93	0.14	0.38	0.07	0.10	10.49	23.31	22.64	18.64	19.18
Na2O	0.11	0.08	0.06	0.14	0.15	0.09	0.10	0.12	0.13	0.15	0.55
K2O	4.28	3.76	3.59	4.15	3.73	2.22	2.25	2.11	1.12	1.96	2.39
P2O5	0.20	0.34	0.21	0.30	0.07	0.09	0.09	0.10	0.14	0.10	0.10
BaO	0.18	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
ZnO	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
CuO	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PbO	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Loss inc. S-	21.09	6.43	10.45	10.53	5.16	3.83	17.48	23.66	27.33	27.10	17.66
Total	99.00	99.58	100.23	99.63	99.74	99.91	99.73	99.86	99.76	99.40	99.58
Sulphur	1.25	0.30	2.27	2.12	0.31	0.28	0.70	0.50	0.47	0.38	0.61
Sb	<1	<1	3	3	<1	<1	<1	<1	<1	<1	<1
Sn	3	10	8	8	10	6	2	3	2	2	4
Cd	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nb	13	20	19	18	21	17	9	6	9	8	10
Zr	198	171	235	258	321	339	83	63	76	66	90
Sr	77	24	66	28	18	13	109	207	208	128	997
Ba	1897	886	808	555	444	240	173	187	83	263	320
Y	24	32	41	42	37	39	17	14	12	13	17
U	4	7	11	12	6	4	3	3	2	3	2
Rb	139	137	169	194	181	105	81	75	50	64	102
Th	11	14	23	23	29	20	6	5	3	5	7
Pb	38	12	60	96	8	7	13	9	14	4	27
As	15.5	9.9	55.9	32.8	<3	3.3	<3	<3	<3	<3	<3
Bi	2	4	7	<2	<2	<2	<2	<2	<2	<2	<2
Zn	155	30	62	29	29	32	45	32	33	47	67
Cu	34	167	4900	41	176	209	28	19	14	9	31
Ni	39	18	108	87	26	26	20	15	11	9	22

Appendix Three – Fluid Inclusion Data

DDH	Depth	FI	Type	Te	Tm	Th	Eq. wt.% NaCl
THRD 752	346.3	cpy assoc vn xcut E2	I	-60.8	-24.1	217.8	25.4
THRD 752	346.3	cpy assoc vn xcut E2	I	-68.2			
THRD 752	346.3	cpy assoc vn xcut E2	I				
THRD 752	324.4	cpy assoc vn xcut S5	II			239.9	
THRD 752	324.4	cpy assoc vn xcut S5	II	-79.3	-11.9	263.3	15.9
THRD 752	324.4	cpy assoc vn xcut S5	II	-71.6	-23.1	221.2	24.8
TND 10	376	cpy assoc vn xcut E2	II			225.6	
TND10	376	cpy assoc vn xcut E2	II			233.1	
TND10	376	cpy assoc vn xcut E2	I			219.8	
TND10	376	cpy assoc vn xcut E2	I			242.3	
TND10	376	cpy assoc vn xcut E2	I			200.8	
TND10	376	cpy assoc vn xcut E2	I			203.6	
TND10	376	cpy assoc vn xcut E2	I			215.3	
TND10	376	cpy assoc vn xcut E2	I	-102.8	-26.4	349.8	26.9
TND10	376	cpy assoc vn xcut E2	I		-20.2		22.89
TND10	376	cpy assoc vn xcut E2	I		-13.6	215	17.6
TND10	376	cpy assoc vn xcut E2	I		-9.9	333.8	13.9
TND10	376	cpy assoc vn xcut E2	I		-10.9		14.9
TND10	376	cpy assoc vn xcut E2	I		-5.1		7.91
TND10	376	cpy assoc vn xcut E2	I		-12.4	200.4	16.4
THRD636A	266.5	Cpy +qtz vn in E2	I			256.9	
THRD636A	266.5	Cpy +qtz vn in E2	I			292.6	
THRD636A	266.5	Cpy +qtz vn in E2	I		-5.7	237	8.8
THRD636A	266.5	Cpy +qtz vn in E2	I			362	
THRD636A	266.5	Cpy +qtz vn in E2	I			328	
THRD636A	266.5	Cpy +qtz vn in E2	I			299	
THRD636A	266.5	Cpy +qtz vn in E2	I			273	
THRD636A	266.5	Cpy +qtz vn in E2	I			320	
THRD636A	266.5	Cpy +qtz vn in E2	I			311	
THRD636A	266.5	Cpy +qtz vn in E2	I			301	
THRD636A	266.5	Cpy +qtz vn in E2	I			343	
THRD636A	266.5	Cpy +qtz vn in E2	I			273	
THRD636A	266.5	Cpy +qtz vn in E2	I			319	
THRD636A	266.5	Cpy +qtz vn in E2	I			287	
THRD636A	266.5	Cpy +qtz vn in E2	I	-44		350.1	
THRD636A	266.5	Cpy +qtz vn in E2	I	-51		215	
THRD636A	266.5	Cpy +qtz vn in E2	I			312.3	
THRD636A	266.5	Cpy +qtz vn in E2	I			366.9	
THRD636A	266.5	Cpy +qtz vn in E2	I			279.8	
THRD636A	266.5	Cpy +qtz vn in E2	I	-44	-10.6	236.1	14.6
THRD636A	266.5	Cpy +qtz vn in E2	I	-51	-6.5	228.6	9.9
THRD636A	266.5	Cpy +qtz vn in E2	I	-48.4	-10.6	220.7	14.6
THRD636A	266.5	Cpy +qtz vn in E2	I		-7.6	243.7	11.2
THRD636A	266.5	Cpy +qtz vn in E2	I	-44.8	-13.6	213.4	17.6
THRD636A	266.5	Cpy +qtz vn in E2	I	-50.5	-7.8	238.3	11.5
THRD636A	266.5	Cpy +qtz vn in E2	I	-49.8	-5	341.9	7.9
TND13	368.7	cpy+qtz vn xcut S5	I			218.8	
TND13	368.7	cpy+qtz vn xcut S5	I			295.7	

Appendix Four – Sulphur Isotope Results

Sulphur Analyses Nifty Cu Deposit (this study)				
DDH		Depth (m)	Description	$\delta^{34}S$
THRD752	Cpy	346.3	Cpy assoc vn	-1.22
TND[illegible]	Cpy	304.0	Cpy assoc vn cross-cutting E2	-0.65
THRD780	Cpy	405.5	massive cpy	5.55
THRD752	Cpy	342.2	cross-cutting cpy assoc vn	0.65
THRD781	Cpy	303.4	cross-cutting cpy assoc vn in shale	-3.31
THRD753	Cpy	400.1	cpy assoc vn cross-cutting Scb	3.52
THRD635	Cpy	393.8	Cpy vn cross-cutting	3.56
THRD635	Py	393.8	Euhdral Py in cpy vn matrix	1.42
THRD757	Cpy	445.0	Cpy vn cross-cutting sh-cc	3.03
THRD757	Py	445.0	euhedral Py in cpy vn matrix	-0.01
THRD643A	Cpy	429.9	Cpy vn cross-cutting	1.22
THRD643A	Py	429.9	euhedral Py in cpy vn matrix	2.02
THRD635	Py	451.2	folded framboid py in bands/beds	-1.44
THRD753	Py	460.9	Sil Py (*S2*)	3.81
THRD780	Py	511.9	Framboidal Py folded	3.41
THRD780	Py	511.9	euhedral py	3.41
THRD781	Py	259.1	Framboidal py-gn-sp	-5.18
THRD781	Py	259.1	Py in bedding parallel band	-4.29
THRD643A	Cpy	429.9	Cpy vn cross-cutting	0.94
THRD643A	Py	429.9	Euhedral Py in cpy matrix	2.58

Abbreviations: DDH-diamond drill hole, cpy-chalcopyrite, assoc-associated, Scb-carbonate, py-pyrite, sil-silicified, gn-galena, sp-sphalerite, *E2*-Green Quartz alteration

Sulphur Analyses Nifty Cu Deposit (Eldridge, 1994a,b)			
DDH	Depth	Mineral	$\delta^{34}S$
THRD645	302.8	py	-18
		py	-14
		py	-17
		py	-18
		py	-24
		py	-22
		cpy	-3
		cpy	-5
		cpy	-6
		cpy	-5
		cpy	-6
THRD645	355.5	py	-5
		py	-2
		mar	-2
		mar-py	0
		py	0
		cpy	-5
		cpy	-4
		cpy	-3
		cpy	-1
THRD645	386.6	py	-12
		py	-4
		py	3

		py	14
		py	-4
		py	1
		py	-7
		py	11
		py	-2
		py	-7
		py	1
		py	0
		py	0
		py	11
THRD780	390.3	py	-7
		py	-10
		py	-3
		py	-19
		py	0
		cpy	-3
		cpy	0
		cpy	-4
		cpy	0
		cpy	-3
THRD780	413.7	py	0
		py	-1
		py	-1
		py	2
		py	0
		cpy	0
		cpy	2
		cpy	0
		cpy	2
		cpy	1
THRD780	488.8	py	10
		py	2
		py	1
		py	-1
		py	11
		py	13
		py	8
		py	6
		py	16
THRD645	324.1	cpy	1
		cpy	-3
		cpy	-1
		cpy	-3
		cpy	-3
		cpy	1
THRD645	340.2	py	-3
		py	-4
		py	-7
		py	-6
		py	-4
		py	-3
		py	6

		py	-7
		py	-7
		py	-4
THRD780	400	py	-4
		py	-3
		py	-5
		py	-16
		py	-27
		py	-8
		cpy	-2
		cpy	-1
		cpy	-3
		cpy	-2
THRD780	450.3	py	-2
		py	16
		py	-1
		py	10
		py	-7
		py	-8
		py	12
		cpy	6
		cpy	2
		cpy	6

Appendix Five - Carbon and Oxygen Isotope Results

DDH	Depth	Lithology/association		Wt mg	Yield mmHg	$\delta^{18}O$ VSMOW	$\delta^{13}C$ VPDB
TND4	279.7	Cpy assoc cb-vn	IIA	26.7*	48.6	17.14	0.13
	287.1	Coarse cb-vn	IIIA	27.4	12.2	18.25	-5.09
TND5	236.0	Bladed cb-vn	IIIB	27.9	16.5	16.79	-3.06
	254.3	Large cb-vn	IIIA	26.6	31.8	15.74	4.21
	254.5	Coarse cb-vn	IIIA	24.5	15.9	15.45	3.09
	260.2	Cpy brg q-cb-vn	IIIA	29.5	69.3	14.92	-6.17
	321.5	Folded So para cb-vn	IA	65.8*	27.6	14.81	-4.97
	325.8	Recry Sd+py	*S3*	82.5*	169.6	15.05	-5.77
	332.8	Folded cb-py-vn	IB	17.2	38.4	15.43	-2.31
	349.1	CA para cb-vn	IC	25.8	12.3	13.60	-7.75
	423.1	Coarse cb-vn	IIIA	24.0	47.3	13.42	-5.51
TND6	220.0	Wavy lam coarse cb So para	IIIA	24.3	43.7	15.66	2.08
TND7	149.2	Coarse cb-vn +Cu ox	IIIA	74.4*	117.5	9.65	-14.37
TND8	229.1	Folded So para cb-vn	IB	18.3	39.9	18.84	-2.56
	229.3	So para cb-vn	IA	44.6	38.6	20.13	-4.15
	234.7	Q-cb-vn	IIIA	28.9	37.4	18.91	-4.10
	303.6	So para cb-vn	IA	35.8	92.5	16.80	-4.69
	315.8	So para cb-vn	IA	17.8	38.2	17.82	-4.35
TND9	200.5	So para cb-vn	IA	17.2	40.1	17.86	-1.19
	204.1	So para cb-vn	IA	32.9	72.7	18.29	-0.56
	273.7	X-cutting cb-vn(coarse +cpy)		17.7	39.8	19.57	-2.67
	285.8	Cpy in coarse cb-vn	IIIA	18.4	39.6	21.63	-5.12
	292.2	Cpy assoc cb-vn	IIA	30.0	62.0	19.66	-2.07
	317.6	Coarse cb-vn, some cpy blebs	IIIA	18.4	42.4	16.89	0.35
TND10	223.0	Upper Carb	Host	36.1	48.2	20.15	2.35
	274.7	So para cb-vn	IA	50.3*	148.7	18.27	1.12
	299.2	So para cb-vn	IA	27.0	33.6	18.21	-3.07
	362.7	So para cb-vn	IA	25.0	91.3	17.36	-2.68
	368.4	Folded alteration margin vn	IIB	24.6	47.4	17.80	-6.88
	380.1	cpy assoc cb-vn	IIA	27.3	64.3	17.34	0.28
	402.9	Cpy assoc cb-vn	IIA	27.4	73.2	19.85	-5.92
	429.5	Folded py-cb-vn	IB	22.2	13.4	16.01	-4.84
	437.6	Bladed cb-vn	IIIB	21.1	45.0	15.65	-3.95
TND11	199.3	So para cb-vn	IA	23.1	29.3	13.45	-2.69
TND12	206.4	X-cutting cb-vn		35.3	151.0	18.97	2.77
	217.4	Cs para cb-vn	IC	29.1	34.8	19.65	2.31
	224.1	So para cb-vn+py	IA	24.3	59.3	18.15	-1.51
	301.2	Coarse cb-vn	IIIA	19.1	42.7	16.67	0.44
	321.1	Coarse q-cb-vn +cpy	IIIA	18.8	48.1	16.43	-2.26
TND13	261.1	Cs para cb-vn	IC	32.3	23.4	20.68	2.17
	272.6	Upper carb	Host	50.4*	92.3	20.45	0.68
	305.0	Coarse cb-vn	IIIA	21.2	54.3	17.87	-3.00
	342.0	Folded cb-vn	IB	23.3	29.8	19.23	-1.69
	353.5	Coarse q-cb-vn	IIIA	35.4	86.3	17.93	-5.78
	375.9	Coarse cb-vn	IIIA	54.7	6.6	17.97	-7.22
TND20	188.9	X-cutting q-cb-vn	IIIA	21.7	60.0	17.23	0.99

The distribution of alteration textures in cross-section 102080mE (Fig. 5.10B) is similar to that of 102000mE (Fig. 5.10A). The maximum alteration is observed in the Nifty member in diamond drill holes of THRD753, THRD647, and THRD752 where an extensive *S5* alteration zone is surrounded by an *S3* halo. Thin zones of *S3* altered rocks occur within *S5*-Black Silica and these zones consist of the Fe-rich form of *S3*-Hydrothermal Quartz-Dolomite. A reduction of the intensity of alteration occurs to the north and south of the main ore body as shown in TND5, TND1, and TND8. TND5 is dominated by *S3*-Hydrothermal Quartz-Dolomite altered rocks and a minor zone of *S2*-Silicified Pyritic Shale in the base of the diamond drill hole. Alteration patterns in THRD781 have been offset by a fault at 369m. To the south of THRD781 the intensity of quartz-dolomite replacement decreases so that in TND8 only minor *S2*-Silicified Pyrite Shale alteration occurs in the vicinity of the pyrite marker bed and several smaller Nifty member beds.

Cross-section 102160mE (Fig. 5.10C) shows a thick zone of *S5* altered rocks surrounded by the halo of *S4* and then *S3* altered rocks. The intensity of alteration decreases to the south of this cross-section while to the north the thick *S5* alteration in THRD648A has not been closed off to the north. The distribution of *S2*-Silicified Pyrite Shale is restricted in thickness and extent in the pyrite marker bed area and in the footwall is only present in THRD751. *S2* is absent from THRD755, however this is likely to be the result of faulting. A thin zone of *S5* altered rock is observed below the pyrite marker bed in the southern-most diamond drill hole (THRD779).

A striking feature of alteration distribution on cross-section 102240mE (Fig. 5.10D) is the limited extent of *S2*-Silicified Pyritic Shale. *S2* occurs as intervals approximately 10m thick in TND12 and THRD636A and in the footwall of THRD780 and THRD635. In other diamond drill holes *S2* is either very thin or absent. Compared to the previous sections there is also a reduction in the distribution of *S3*-Hydrothermal Quartz-Dolomite and this classification appears to be restricted to the lower intervals of the diamond drill holes. The distribution of *S5*-Black Silica and the enveloping *S4*-Silicified Dolomitic Shale are similar to that observed in the previous cross-sections (Fig. 5.10A-C).

The trend observed in Figure 5.10D of reduced concentrations of *S3*-Hydrothermal Quartz-Dolomite altered rocks is continued in cross-section 102320mE (Fig. 5.10E). Cross-section 102320 has a thick (~75m) zone of *S5*-Black Silica in diamond drill hole THRD639 which is the result of a fault repetition of the altered rocks. No *S5* alteration is observed in THRD637 but *S4*-Silicified Dolomitic Shale and minor *S3*-Hydrothermal Quartz-Dolomite are the dominant alteration. In the southern diamond drill holes (THRD646 and THRD757) thin zones of *S5* are surrounded by *S4*. *S2*-Silicified Pyritic Shale distribution is restricted to the pyrite marker bed in the two northern-most diamond drill core (THRD637 and THRD639) and the footwall contact in THRD637. The distribution patterns of alteration textures in cross-section 102320mE suggests that these drill holes are located on the edge of the alteration and mineralisation zones.